

Search query (5): [SP]: claims 1. method for estimating the electrical power consumed by a domestic electric network comprising an electronic energy meter (2) connected to an electrical power distribution grid, the method comprising the steps of: - periodically polling, according to a fixed or variable polling period t_q , the electronic energy meter (2) on a communication channel by means of a device (5) comprising electrical connection elements (7) connected to the domestic electric network (1), in order to receive, at every polling instant, information comprising at least one parameter related to a power consumption measurement carried out by the electronic energy meter (2) - calculating or obtaining on-board the device (5) first voltage values (vcei) and corresponding first current values (icei) the method characterised in that it comprises the steps of: - sampling, by means of a voltage measurement circuit (18) provided on-board said device (5) and connected to said electrical connection elements (7), the voltage of the domestic electric network (1) according to a sampling period t_s less than said polling period to obtain second voltage values (vdevj, vdevi) and - determining on-board the device (5) a plurality of estimated values of power consumed (plji), between two consecutive polling instants of the electronic meter (2), as a function of said first voltage values (vcei), of said first current values (icei) and of said second voltage values (vdevj). 2. method according to claim 1, wherein the determining step comprises the steps of: - calculating an equivalent resistance (req), which is indicative of the equivalent resistance seen by the electronic meter (2) towards the electricity distribution grid, as a function of a series of said first voltage values (vcei) and a corresponding series of said first current values (icei) and - determining estimated values of power consumed (pl i) as a function of said first voltage values (vcei), of said first current values (icei), of said equivalent resistance (req) and of said second voltage values (vdevj, vdevi). 3. method according to claim 2, wherein said equivalent resistance (req) is calculated as the sliding window arithmetic average of an instantaneous resistances (reqi), each of which is calculated as the ratio between a first voltage variation (avcei) and a corresponding first current variation (alcei), said first voltage variation (avcei) being a difference between two first voltage values acquired/calculated in two consecutive polling steps and said first current variation (alcei) being a difference between two current values obtained/calculated in the same two polling steps. 4. method according to claims 2 or 3, wherein the determining step comprises the steps of: - determining estimated values of power consumed (plji) between two consecutive polling steps (i, i+1) as a function of one of said first voltage values (vcei) and one of said first current values (icei) acquired at the first of said two consecutive polling steps and as a function of the second voltage values (vdevj) sampled between the two consecutive polling steps. 5. method according to claims 2 or 3, wherein the determining step comprises the steps of: - for each sampling step (j) between two consecutive polling steps (i, i+1), calculating a related second voltage variation (avdevji) between one of said second voltage values (vdevj), relating to this sampling step, and another of said second voltage values (vdevi), sampled at the first of the two consecutive polling steps and - for each sampling step (j) between two consecutive polling steps (i, i+1), calculating a related estimated value of power consumed (plji) as a function of one of said first voltage values (vcei) and of one of said first current values (icei) obtained or calculated at the first of said two consecutive polling steps and as a function of said second voltage values (avdevji) of said equivalent resistance (req). 6. method according to claim 5, wherein said estimated value of power consumed is calculated according to the formula: $plji = (vcei + avdevji) (icei + aldevji)$, where pl i is the estimated value of power consumed at the generic sampling step j, vcei is said one of said first voltage values obtained/calculated at the first of said two consecutive polling steps, avdev i is said second voltage variation, icei is said one of said first current values obtained/calculated at the first of said two consecutive polling steps and aldev i is a second current variation calculated as the ratio between said second voltage variation and said equivalent resistance. 7. method according to any one of claims 1 to 6, comprising a step of varying the polling period as a function of said estimation values of power consumed (plji). 8. method according to claim 7, wherein said varying step comprises an operation of progressively reducing said polling period as a function of said estimated values of power consumed (plji). 9. method according to any one of claims 1 to 8, comprising the steps of: - subdividing the range of power deliverable by the electronic energy meter (2) into a plurality of power bands by means of a corresponding plurality of power threshold values - associating to the power bands respective polling period values, which decrease passing from the lowest power band to the highest power band - identifying the power band in which said estimated values of power consumed (plji) are found on the basis of a comparison between said estimated values of power consumed and said power threshold values and - adjusting the polling period to the polling period value associated with the power band identified. 10. method according to any one of claims 1 to 9, and comprising: - subdividing the range of power deliverable by said electronic energy meter (2) into a plurality of power bands by means of a corresponding plurality of power threshold values - identifying the power band in which said estimated values of power consumed (plji) are found on the basis of a comparison between said estimated values of power consumed and said power threshold values and - associating to the respective power bands initial polling times (tqok), each of which consists of the time that must elapse from when the estimated values of power consumed are entered in the related power band following an increase of power before performing a first polling of said electronic meter (2) in such power band. 11. method according to any one of the preceding claims, wherein said communication channel is said domestic electric network and wherein said electronic energy meter (2) and said device communicate with each other over between them on said electric network by means of powerline communication. 12. method according to any one of the preceding claims, wherein said sampling step is performed by sampling said network voltage as analogue input voltage to produce said second voltage values as digital values. 13. method according to any one of the preceding claims, wherein said second voltage values are obtained by the device (5) in an autonomous way with respect to the electronic energy meter (2). 14. device (5) operatively connectable to an electronic energy meter to estimate the electrical power consumed by a domestic electric network comprising said electronic energy meter (2), the device (5) comprising electrical connection elements (7) for connecting the device to the domestic electric network (1), a communication interface (8) for communication with the electronic energy meter (2) on a communication channel and a processing and control unit (11) operatively connected to the communication interface (8), the device (5) being configured and programmed to poll the electronic energy meter (2) on said communication channel in order to receive at each polling instant information comprising at least one parameter related to a power consumption measurement carried out by the electronic energy meter (2) and being characterised in that: - the device (5) comprises a voltage measurement circuit (18) for measuring the voltage of the domestic electric network (1) at the connection point with said electrical connection elements (7) and outputting a plurality of voltage values between two subsequent pollings of the electronic energy meter (2) - the processing and control unit (11) is configured for calculating a plurality of estimated values of power consumed between two subsequent pollings by means of a function that depends on said voltage values provided by the voltage measurement circuit (8) and by said at least one received parameter related to a power consumption measurement carried out by the electronic energy meter (2). 15. device according to claim 14, said device is such as to sample the network voltage as analogue input voltage to produce said second voltage values as digital values. 16. device according to any of the preceding claims, wherein said second voltage values are obtained by the device (5) in an autonomous way with respect to the electronic energy meter (2). 17. device according to claim 14, wherein said communication interface (8) is a powerline communication interface. 18. device according to any of claims 14 to 17, wherein the processing and control unit (11) is configured to implement a method according to any of claims 1 to 13.

Results: 6

Search history

Search PN=(WO2016160608) (Results 1)

1:

Search [SP]: motion vector derivation in video coding in an example, a method of processing video data includes determining a candidate motion vector for deriving motion information of a current block of video data, where the motion information indicates motion of the current block relative to reference video data. the method also includes determining a derived motion vector for the current block based on the determined candidate motion vector, where determining the derived motion vector comprises performing a motion search for a first set of reference data that corresponds to a second set of reference data outside of the current block. (Results 33)

Search PN=(WO2017021872) (Results 1)

3:

Search [SP]: method and device for estimating the electrical power consumed by a domestic electric network procede et dispositif d'estimation de l'energie electrique consommee par un reseau electrique domestique a method is described for estimating the electrical power consumed by a domestic electric network comprising an electronic energy meter (2) connected to an electrical power distribution grid, the method comprising the steps of: - periodically polling, according to a fixed or variable polling period, the electronic energy meter (2) on a communication channel by means of a device (5) comprising electrical connection elements (7) connected to the domestic electric network (1), in order to receive, at every polling instant, information comprising at least one parameter related to a power consumption measurement carried out by the electronic energy meter (2) - calculating or obtaining on-board the device (5) first voltage values (vcei) and corresponding first current values (icei). the method is characterised in that it comprises the steps of: - sampling, by means of a voltage measurement circuit (18) provided on-board said device (5) and connected to said electrical connection elements (7), the voltage of the domestic electric network (1) according to a sampling period (t_s) less than said polling period to obtain second voltage values (vdevj, vdevi) and- determining on-board the device (5) a plurality of estimated values of power consumed (plji), between two consecutive polling instants of the electronic meter, as a function of said first voltage values (vcei), of said first current values (icei) and of said second voltage values (vdevj)l'invention concerne un procede d'estimation de l'energie electrique consommee par un reseau electrique domestique comprenant un compteur d'energie electrique (2) connecte a un reseau de distribution d'energie electrique, le procede comprenant les etapes consistant: - a interroger periodiquement, en fonction d'une periode d'interrogation variable ou fixe, le compteur d'energie electrique (2) sur un canal de communication au moyen d'un dispositif (5) comprenant des elements de connexion electrique (7) connectes au reseau electrique domestique (1), de maniere a recevoir, a chaque instant d'interrogation, des informations comprenant au moins un parametre lie a une mesure de consommation d'energie effectuee par le compteur d'energie electrique (2) - a calculer ou a obtenir a bord du dispositif (5) des premieres valeurs de tension (vcei) et des premieres valeurs de courant (icei) correspondantes. le procede est caracterise en ce qu'il comprend les etapes consistant: - a echantillonner, par l'intermediaire d'un circuit de mesure de tension (18) prevu a bord dudit dispositif

(5) et connecte auxdits éléments de connexion électrique (7), la tension du réseau électrique domestique (1) conformément à une période d'échantillonnage (t_s) inférieure à ladite période d'interrogation pour obtenir des secondes valeurs de tension (v_{devj} , v_{devi}) et - a déterminer à bord du dispositif (5) une pluralité de valeurs estimées de l'énergie consommée (pl_{ji}), entre deux instants d'interrogation consécutifs du compteur électronique, en fonction desdites premières valeurs de tension (v_{cei}), desdites premières valeurs de courant ($icei$) et desdites secondes valeurs de tension (v_{devj}). (Results 0)

Search 5: [SP]: claims 1. method for estimating the electrical power consumed by a domestic electric network comprising an electronic energy meter (2) connected to an electrical power distribution grid, the method comprising the steps of: - periodically polling, according to a fixed or variable polling period t_q , the electronic energy meter (2) on a communication channel by means of a device (5) comprising electrical connection elements (7) connected to the domestic electric network (1), in order to receive, at every polling instant, information comprising at least one parameter related to a power consumption measurement carried out by the electronic energy meter (2) - calculating or obtaining on-board the device (5) first voltage values (v_{cei}) and corresponding first current values ($icei$) the method characterised in that it comprises the steps of: - sampling, by means of a voltage measurement circuit (18) provided on-board said device (5) and connected to said electrical connection elements (7), the voltage of the domestic electric network (1) according to a sampling period t_s less than said polling period to obtain second voltage values (v_{devj} , v_{devi}) and - determining on-board the device (5) a plurality of estimated values of power consumed (pl_{ji}), between two consecutive polling instants of the electronic meter (2), as a function of said first voltage values (v_{cei}), of said first current values ($icei$) and of said second voltage values (v_{devj}). 2. method according to claim 1, wherein the determining step comprises the steps of: - calculating an equivalent resistance (req), which is indicative of the equivalent resistance seen by the electronic meter (2) towards the electricity distribution grid, as a function of a series of said first voltage values (v_{cei}) and a corresponding series of said first current values ($icei$) and - determining estimated values of power consumed (pl_i) as a function of said first voltage values (v_{cei}), of said first current values ($icei$), of said equivalent resistance (req) and of said second voltage values (v_{devj} , v_{devi}). 3. method according to claim 2, wherein said equivalent resistance (req) is calculated as the sliding window arithmetic average of an instantaneous resistances (req_i), each of which is calculated as the ratio between a first voltage variation (av_{cei}) and a corresponding first current variation (al_{cei}), said first voltage variation (av_{cei}) being a difference between two first voltage values acquired/calculated in two consecutive polling steps and said first current variation (al_{cei}) being a difference between two current values obtained/calculated in the same two polling steps. 4. method according to claims 2 or 3, wherein the determining step comprises the steps of: - determining estimated values of power consumed (pl_{ji}) between two consecutive polling steps (i , $i+1$) as a function of one of said first voltage values (v_{cei}) and one of said first current values ($icei$) acquired at the first of said two consecutive polling steps and as a function of the second voltage values (v_{devj}) sampled between the two consecutive polling steps. 5. method according to claims 2 or 3, wherein the determining step comprises the steps of: - for each sampling step (j) between two consecutive polling steps (i , $i+1$), calculating a related second voltage variation (av_{devji}) between one of said second voltage values (v_{devj}), relating to this sampling step, and another of said second voltage values (v_{devi}), sampled at the first of the two consecutive polling steps and - for each sampling step (j) between two consecutive polling steps (i , $i+1$), calculating a related estimated value of power consumed (pl_{ji}) as a function of one of said first voltage values (v_{cei}) and of one of said first current values ($icei$) obtained or calculated at the first of said two consecutive polling steps and as a function of said second voltage values (av_{devji}) of said equivalent resistance (req). 6. method according to claim 5, wherein said estimated value of power consumed is calculated according to the formula: $pl_{ji} = (v_{cei} + av_{devji}) (icei + al_{devji})$, where pl_i is the estimated value of power consumed at the generic sampling step j , v_{cei} is said one of said first voltage values obtained/calculated at the first of said two consecutive polling steps, av_{devi} is said second voltage variation, $icei$ is said one of said first current values obtained/calculated at the first of said two consecutive polling steps and al_{devi} is a second current variation calculated as the ratio between said second voltage variation and said equivalent resistance. 7. method according to any one of claims 1 to 6, comprising a step of varying the polling period as a function of said estimation values of power consumed (pl_{ji}). 8. method according to claim 7, wherein said varying step comprises an operation of progressively reducing said polling period as a function of said estimated values of power consumed (pl_{ji}). 9. method according to any one of claims 1 to 8, comprising the steps of: - subdividing the range of power deliverable by the electronic energy meter (2) into a plurality of power bands by means of a corresponding plurality of power threshold values - associating to the power bands respective polling period values, which decrease passing from the lowest power band to the highest power band - identifying the power band in which said estimated values of power consumed (pl_{ji}) are found on the basis of a comparison between said estimated values of power consumed and said power threshold values and - adjusting the polling period to the polling period value associated with the power band identified. 10. method according to any one of claims 1 to 9, and comprising: - subdividing the range of power deliverable by said electronic energy meter (2) into a plurality of power bands by means of a corresponding plurality of power threshold values - identifying the power band in which said estimated values of power consumed (pl_{ji}) are found on the basis of a comparison between said estimated values of power consumed and said power threshold values and - associating to the respective power bands initial polling times (t_{qok}), each of which consists of the time that must elapse from when the estimated values of power consumed are entered in the related power band following an increase of power before performing a first polling of said electronic meter (2) in such power band. 11. method according to any one of the preceding claims, wherein said communication channel is said domestic electric network and wherein said electronic energy meter (2) and said device communicate with each other over between them on said electric network by means of powerline communication. 12. method according to any one of the preceding claims, wherein said sampling step is performed by sampling said network voltage as analogue input voltage to produce said second voltage values as digital values. 13. method according to any one of the preceding claims, wherein said second voltage values are obtained by the device (5) in an autonomous way with respect to the electronic energy meter (2). 14. device (5) operatively connectable to an electronic energy meter to estimate the electrical power consumed by a domestic electric network comprising said electronic energy meter (2), the device (5) comprising electrical connection elements (7) for connecting the device to the domestic electric network (1), a communication interface (8) for communication with the electronic energy meter (2) on a communication channel and a processing and control unit (11) operatively connected to the communication interface (8), the device (5) being configured and programmed to poll the electronic energy meter (2) on said communication channel in order to receive at each polling instant information comprising at least one parameter related to a power consumption measurement carried out by the electronic energy meter (2) and being characterised in that: - the device (5) comprises a voltage measurement circuit (18) for measuring the voltage of the domestic electric network (1) at the connection point with said electrical connection elements (7) and outputting a plurality of voltage values between two subsequent pollings of the electronic energy meter (2) - the processing and control unit (11) is configured for calculating a plurality of estimated values of power consumed between two subsequent pollings by means of a function that depends on said voltage values provided by the voltage measurement circuit (8) and by said at least one received parameter related to a power consumption measurement carried out by the electronic energy meter (2). 15. device according to claim 14, said device is such as to sample the network voltage as analogue input voltage to produce said second voltage values as digital values. 16. device according to any of the preceding claims, wherein said second voltage values are obtained by the device (5) in an autonomous way with respect to the electronic energy meter (2). 17. device according to claim 14, wherein said communication interface (8) is a powerline communication interface. 18. device according to any of claims 14 to 17, wherein the processing and control unit (11) is configured to implement a method according to any of claims 1 to 13. (Results 6)

Title: SYSTEM FOR THE REAL-TIME MANAGEMENT OF A PLURALITY OF ELECTRONIC METERS USED TO MEASURE ENERGY AND/OR EFFLUENT CONSUMED

Abstract: The invention relates to a system for the real-time management of a group of meters used to measure energy and/or effluent consumed, said system supplying metering data on a local network. The inventive system comprises: a module (1) ensuring temporary and/or essentially permanent connection to, and interfacing with, the local network, enabling said metering data to be transmitted on a wide area network; a database (2) which is connected to the wide area network and enables the metering data to be archived; and a module (3) for managing the metering data by subscriber or group of subscribers, enabling consumption behaviour profiles to be established for each subscriber and/or group of subscribers. The invention can be applied to the management of electrical energy and all types of effluent.

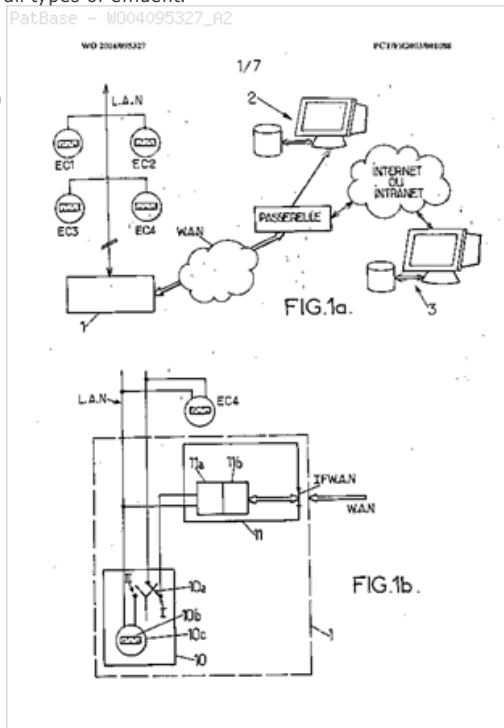
Classifications:

International (IPC 8-9): G01D4/00 G01R11/00 G01R22/00
G01R22/06 G06Q10/00 G06Q50/06 G07F11/00 G07F15/12 G07F5/18
H04L12/24 (Advanced/Invention);
G01D4/00 G01R11/00 G01R22/00 G01R22/06 G06Q10/00 G07F15/00
G07F5/00 H04L12/24 (Core/Invention)

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G06Q50/06

European: G01D4/00R1 G01R22/06D1 G07F11/00B G07F15/12
G07F5/18 H04L12/24E3 H04L41/08F Y02B90/24B2 Y02B90/24F
Y04S20/32B Y04S20/42



Family:

Publication number	Publication date	Application number	Application date
AU2003246786 AA	20041119	AU20030246786	20030407
AU2003246786 AH	20041119	AU20030246786	20030407
EP1616296 A2	20060118	EP20030816675	20030407
WO04095327 A2	20041104	WO2003FR01088	20030407
WO04095327 A3	20051103	WO2003FR01088	20030407

Priority:

WO2003FR01088 20030407

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Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK
DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ
LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SC
SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Title: INTELLIGENT AUTOMATIC METER READING SYSTEM FOR COLLECTING AND MANAGING DATA FROM METERING DEVICES

Abstract: Intelligent automatic meter reading system for collecting and managing data from metering devices which comprises of two main modules i.e., CPU and GSM modem module, CPU module being powered with an ARM7 core controller (LPC2214), the microcontroller has two internal UARTs (compatible with 16C550) that are utilized for connecting a serial GSM modem and an Electronic TVM, the firmware is built such a way, that the controller reads the meter instantaneous parameters at regular intervals and analyzes the data for any abnormal conditions, in case an abnormality is found, the controller further checks for some more time for the existence of the same abnormality and after the fixed time is lapsed, it sends an SMS message to the base station about the abnormality with the snapshot of the instantaneous parameters, the unit having a large memory space to store additional data such as billing parameters and load survey, the data is being sent to the base station from time to time in the form of SMS and different reports are generated and presented at the base station for a proper analysis of load flow and power consumption.

Classifications:

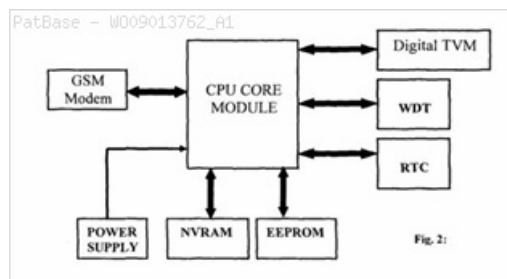
International (IPC 8-9): G01D4/00 H04L12/58

H04Q7/22 (Advanced/Invention);

G01D4/00 H04L12/58 (Core/Invention)

CPC: G01D4/004 Y02B90/242 Y04S20/322

European: G01D4/00R1 Y02B90/24B2 Y04S20/32B



Family:

Publication number	Publication date	Application number	Application date
EP2171401 A1	20100407	EP20080751428	20080317
WO09013762 A1	20090129	WO2008IN00152	20080317

Priority:

IN2007CH01282 20070723 WO2008IN00152 20080317

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Inventor(s): (std): REDDY G BALA

Inventor(s): REDDY G

Agent(s): SANDMANN WOLFGANG; DASWANI HEMANT ET AL

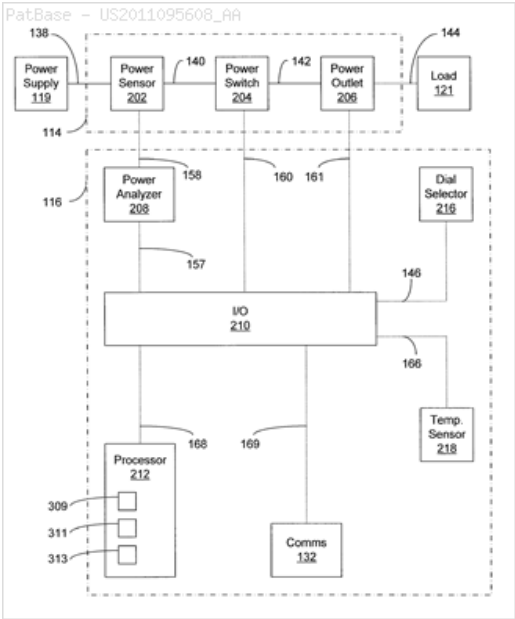
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: POWER NODE FOR ENERGY MANAGEMENT

Abstract: A power node provides energy management features in a networked data communications and control environment.

Classifications:

International (IPC 8-9): A63B71/00 F21K9/232 F21K99/00 F21V23/00 F21V23/04 F21V29/506 F21V3/00 F21V3/02 F21Y101/00 G01D4/00 G01R13/00 G01R21/00 G01R21/133 G05D3/12 G06F1/26 G06F1/28 G06F1/32 G06F11/30 G06F17/00 G06F19/00 G08B21/00 H01R13/66 H01R13/70 H01R13/703 H01R25/00 H02J1/00 H02J13/00 H02J3/00 H02J3/14 H04L12/10 H04L12/16 H04L12/28 H04W4/00 H05B33/08 H05B37/00 H05B37/02 H05K13/00 (Advanced/Invention); F21Y101/00 F21Y101/02 F21Y115/10 (Advanced/Non-invention)
CPC: H04L12/2825 Y02B70/325 Y04S20/228 F21V3/02 G01R21/133 H05B37/02 Y02B70/3266 Y04S20/242 Y02B70/3283 Y04S20/246 G06F1/3209 Y02B20/445 F21V29/506 F21V29/83 Y10T29/49002 Y10T307/461 Y10T307/469 Y10T307/406 Y10T307/74 Y10T307/747 F21V3/00 F21V23/04 Y02B20/19 Y10S362/801 G01D4/002 H01R13/6683 H01R13/703 H01R25/003 H02J3/14 H02J13/0062 H02J2003/143 Y02B90/241 Y02B90/245 Y04S20/32 Y04S20/38 Y04S20/40 H05B33/0851 H05B37/0272 H05B33/0848 Y02B70/3225 Y02B90/226 Y02B90/2638 Y04S20/16 Y04S20/222 Y04S40/124 F21K9/232 F21Y115/10 Y02A30/62 H04W4/80
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Family:

Publication number	Publication date	Application number	Application date
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Priority:

US20090254709P	20091025	US20090261707P	20091116	US20100777229	20100510
US20100795395	20100607	US20100795417	20100607	US20100795406	20100607
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Probable Assignee: GREENWAVE SYSTEMS PTE LTD

Assignee(s): (std): GREENWAVE REALITY PTE LTD ; JONSSON KARL ; JONSSON KARL S ; GREENWAVE REALITY INC ; MANNICHE MARTIN ; LYONS TIMOTHY ; GREENWAVE SYSTEMS PTE LTD ; WINDSTRUP SONNY ; DIEHL WILLIAM ; GREENWARE SYSTEMS PTE LTD

Assignee(s): GREENWAVE REALITY ; BSP AGENCY LLC SUCCESSOR AGENT AS ; BUSINESS DEVELOPMENT OF AMERICA CORP ; SILICON VALLEY BANK

Inventor(s): (std): DIEHL WILLIAM ; WINDSTRUP SONNY ; JONSSON KARL ; JONSSON KARL S ; MANNICHE MARTIN ; LYONS TIMOTHY ; WILLIAM DIEHL ; MARTIN MANNICHE ; SONNY WINDSTRUP ; TIMOTHY LYONS ; KARL JONSSON

Agent(s): K AND H BONAPAT; STOLMAR AND PARTNER PATENTANWAELTE PARTG MBB; KEANE PAUL FACHTNA; MOORE BARRY; FRKELLY; Keane Paul Fachtna; BRUCE A; YOUNGS PATENT SERVICES LLC; YOUNG BRUCE

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: EVENT IDENTIFICATION

Abstract: A method of identifying an event associated with consumption of a utility comprising the steps of generating a utility consumption profile from utility consumption data, the utility consumption data comprising a plurality of utility consumption values measured at a corresponding plurality of measurement points, and identifying an event within the utility consumption profile that matches the profile of an event stored in a database of utility consumption profiles. A computer implemented apparatus, a computer program code and an article of manufacture comprising a machine-readable storage medium and executable program instructions embodied therein, for carrying out the method are also provided.

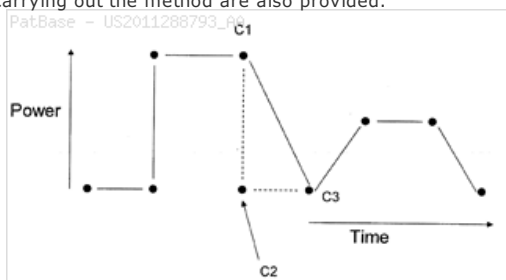
Classifications:

International (IPC 8-9): G01D3/032 G01D4/00 G01F1/00 G01R21/00 G06F15/00 G06F17/00 G06F17/14 G06F17/30 G06F17/40 G06F19/00 G06N5/02 G06Q10/00 G06Q10/04 G06Q50/00 G06Q50/06 H02J13/00 (Advanced/Invention); G01N29/44 (Advanced/Non-invention)

CPC: G06F17/30129 G06F17/30598 G06F17/148 G01D4/00 G06F17/40 Y02B90/241 Y04S20/224 Y04S20/32 Y04S20/44 G01D4/002 G06Q10/04 G06Q50/06 H02J3/14 H02J2003/003 H02J2003/143 H02J2003/146 Y02B90/245 Y04S20/40 G01N29/4463 G01D3/032 G01D4/004 Y02B70/3266 Y02B90/242 Y04S20/242 Y04S20/322 Y04S20/38

European: G01D3/032 G01D4/00R G01D4/00R1 G06Q10/04 G06Q50/06 T02J3/00L T02J3/14 T02J3/14H T02J3/14T Y02B90/24B2 Y04S20/30 Y04S20/32B Y04S20/38

US: 324/160 324/207.23 382/275 702/127 702/179 702/190 702/191 702/191S 702/45 702/45P 702/57 702/60 702/61 702/61P 702/61S 702/62 702/62S 706/50 706/50P 707/693 707/736 707/737 707/758 707/812 707/812P 707/E17.005 707/E17.005S

**Family:**

Publication number	Publication date	Application number	Application date
DE602010027603 D1	20151029	DE201060027603T	20101112
DE602010031101 D1	20160421	DE201060031101T	20101220
DE602010031473 D1	20160512	DE201060031473T	20101112
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Priority:

EP20090019785	20091112	EP20090197856	20091112	GB20090019785	20091112
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US20110027636	20110215				

Probable Assignee: ONZO LTD

Assignee(s): (std): BRUNT CLARKE ; HORSFORD EDWARD ; MCGUIGAN BRIAN ; ONZO LTD ; SANCHEZ LOUREDA JOSE MANUEL ; WESTBROOKE ADAM RICHARD ; SANCHEZ LOUREDA JOSE ; SANCHEZ LOUREDA JOSE MANUEL

Assignee(s): ONZO LIMITED

Inventor(s): (std): LOUREDA JOSE MANUEL SANCHEZ ; MCGUIGAN BRIAN ; SANCHEZ LOUREDA JOSE MANUEL ; WESTBROOKE ADAM RICHARD ; SANCHEZ LOUREDA JOSE ; SANCHEY LOUREDA JOSE MANUEL ; BRUNT CLARKE ; HORSFORD EDWARD

Inventor(s): JOSE MANUEL SANCHEZ LOUREDA ; CLARKE BRUNT ; ADAM RICHARD WESTBROOKE ; EDWARD HORSFORD ; BRIAN MCGUIGAN

Agent(s): OLSWANG GERMANY LLP; HILL JUSTIN JOHN; ARENT FOX LLP; IPULSE; IPULSE ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: APPARATUS AND METHOD FOR DATA COMMUNICATION IN AN ENERGY DISTRIBUTION NETWORK

Abstract: A system for communicating information on an energy distribution network is disclosed. In one embodiment, the system includes a local supervisor on a communication network, wherein the local supervisor can collect data from one or more energy generation/monitoring devices. The system also includes a command center on the communication network, wherein the command center can generate one or more commands for controlling the one or more energy generation devices. The local supervisor can periodically transmit a data signal indicative of the data to the command center via a first channel of the communication network at a first interval. The local supervisor can also periodically transmit a request for a command to the command center via a second channel of the communication network at a second interval shorter than the first interval. This channel configuration provides effective data communication without a significant increase in the use of network resources.

Classifications:

International (IPC 8-9): G05B G05B19/418 G06F13/00 G06F17/00 H04L H04L12/24 H04L12/26 H04L12/40 H04L29/08

H04Q9/00 (Advanced/Invention);

G05B H04L (Subclass/Invention)

CPC: H02J13/0062 H02J13/0072 H02J13/0075 H02J13/0079

Y02E10/563 Y04S10/123 H02J13/0024 H02J3/383 H04L12/40182

H04L2012/4026 Y02E40/72

US: 370/241 726/11

JP F-Term: 5B089 5B089/GA11 5B089/GA23 5B089/GB02

5B089/HA10 5B089/JA35 5B089/JB10 5B089/JB14 5B089/KA13

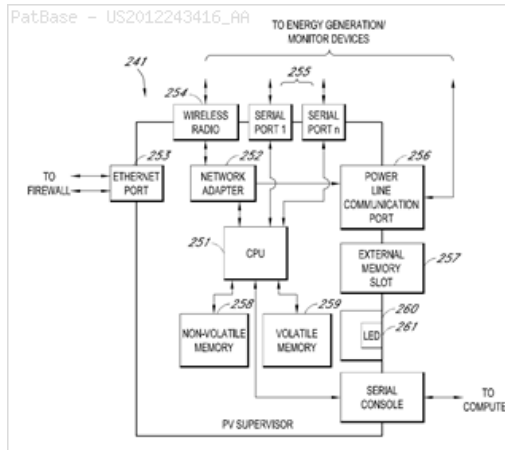
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5K048/DC01 5K048/DC03 5K048/EB02 5K048/EB10 5K048/FC03

JP F-Index: G06F13/00/351/Z H04L13/00/307/D H04Q9/00/301/Z

**Family:**

Publication number	Publication date	Application number	Application date
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Priority:

US20110070351 20110323 WO2011US63574 20111206

Probable Assignee: SUNPOWER CORP

Assignee(s): (std): HUSSAIN MOHSIN ; SUNPOWER CORP ; LAPORTE BROCK ; UEBEL UDO ; ZIA AFTAB

Assignee(s): ENERGY UNITED STATES DEPARTMENT OF

Inventor(s): (std): HUSSAIN MOHSIN ; LAPORTE BROCK ; UEBEL UDO ; ZIA AFTAB

Agent(s): SPRUSON AND FERGUSON; PORZIO RIOS AND ASOCIADOS; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAUESSER; RYUKA IP LAW FIRM; KNOBBE MARTENS OLSON AND BEAR LLP; ALTMAN DANIEL E

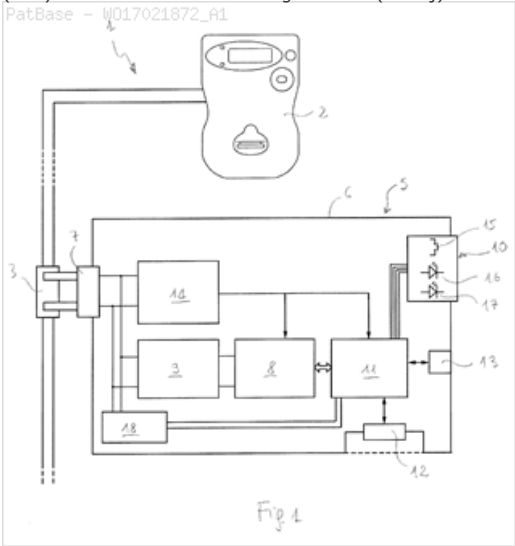
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Title: METHOD AND DEVICE FOR ESTIMATING THE ELECTRICAL POWER CONSUMED BY A DOMESTIC ELECTRIC NETWORK

Abstract: A method is described for estimating the electrical power consumed by a domestic electric network comprising an electronic energy meter (2) connected to an electrical power distribution grid, the method comprising the steps of: - periodically polling, according to a fixed or variable polling period, the electronic energy meter (2) on a communication channel by means of a device (5) comprising electrical connection elements (7) connected to the domestic electric network (1), in order to receive, at every polling instant, information comprising at least one parameter related to a power consumption measurement carried out by the electronic energy meter (2); - calculating or obtaining on-board the device (5) first voltage values (Vcei) and corresponding first current values (Icei). The method is characterised in that it comprises the steps of: - sampling, by means of a voltage measurement circuit (18) provided on-board said device (5) and connected to said electrical connection elements (7), the voltage of the domestic electric network (1) according to a sampling period (Ts) less than said polling period to obtain second voltage values (Vdevj, Vdevi); and- determining on-board the device (5) a plurality of estimated values of power consumed (PLji), between two consecutive polling instants of the electronic meter, as a function of said first voltage values (Vcei), of said first current values (Icei) and of said second voltage values (Vdevj)

Classifications:

International (IPC 8-9): G01D4/00 (Advanced/Invention)
CPC: G01D4/004 G01D4/002 Y02B90/241 Y02B90/242 Y02B90/246 Y04S20/32 Y04S20/322 Y04S20/42



Family:

Publication number	Publication date	Application number	Application date
CL2017003046 A1	20180323	CL20170003046	20171130
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ITUB20152847 A1	20170204	IT2015UB02847	20150804
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Priority:

IT201510000041587 20150804 IT2015UB02847 20150804 IT2015UB28474 20150804
WO20161B54631 20160802

Probable Assignee: E DISTRIBUZIONE S P A

Assignee(s): (std): E DISTRIBUZIONE S P A ; E DISTRIBUZIONE SPA ; ENEL DISTRIBUZIONE S P A ; ENEL DISTRIBUZIONE SPA

Inventor(s): (std): MANDOLINI LUIGI

Inventor(s): LUIGI MANDOLINI

Agent(s): ALESSANDRI Y COMPANIA; LUZ HELENA ADARVE GOMEZ; CARANGELO PIERLUIGI; CARANGELO PIERLUIGI ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW