

**HOUSEHOLD ELECTRICAL POWER METER USING EMBEDDED RFID  
WITH WIRELESS SENSOR NETWORK PLATFORM**

**by**

**WASANA BOONSONG**

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SENSOR NETWORK PLATFORM**

**WASANA BOONSONG**

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## LIST OF ABBREVIATIONS

AC	Alternating Current
ACEL	Alternating Current Electronic Load
ACK	Acknowledge
ADC	Analog-to-Digital Converter
ALU	Arithmetic Logic Unit
AMI	Automated Meter Infrastructure
AMI	Advanced Metering Infrastructure
AMM	Automated Meter Management
AMR	Automated Meter Reading
AMI	Advance Metering Infrastructure
AREF	Analog Reference
ASIC	Application Specified Integrated Circuit
AVR	Automatic Voltage Regulator
BAN	Building Area Network
BDC	Binary Code Decimal
BD	Baud Rate
BP	Back-Propagation
CEP	Complex Event Processing
CH	Channel
CISC	Complex Instruction Set Computer
CMOS	Complementary Metal-Oxide Semiconductor
CPN	Customer Premises Network
CPS	Cyber Physical System

CPU	Central Processing Unit
CR	Cognitive Radio
CSMA/CA	Carrier Sense Multiple Access/Collision Avoidance
CT	Current Transformer
CTS	Clear-to-Sent
DCU	Data Concentrator Unit
DMT	Digital Micro Technology
DSO	Distribution System Operator
DTV	Digital Television
EEM	Electronic Energy Meter
EEPROM	Electrically Erasable Programmable Read-Only Memory
EMS	Energy Management System
EPRFID	Embedded RFID module with household electrical Power Meter
EIRP	Effective Isotropic Radiated Power
EV	Electrical Vehicle
FCC	Federal Communication Commission
FFD	Full-Function Device
GIS	Geographic Information System
GSM	Global System for Mobile
GUI	Graphical User Interface
GT	Guard Time
HAN	Home Area Network
H2M	Human-to-Machine
HTAMI	High Traffic-Advanced Metering Infrastructure
IC	Integrated Circuit

ICT	Information and Communication Technology
ID	Identification
IEEE	Institute of Electrical and Electronics Engineers
IoT	Internet of Thing
ISM	Industrial, Scientific and Medical
IT	Information Technology
JEDEC	Joint Electron Device Engineering
KWh	Kilowatts per hour
LAN	Local Area Network
LOS	Light-of-Sight
LTE	Long Term Evolution
MAC	Medium Access Control
MDMS	Meter Data Management System
MCU	Multipoint Control Unit
M2M	Machine-to-Machine
MLF	Micro Lead Frame
NAV	Network Allocation Vector
NGB	Next Generation Broadcasting
NILM	Non-Intrusive Load Monitoring
NIWEM	Non-Intrusive Wireless Energy Meter
NLOS	Non Light-of-Sight
NWK	Network Layer
PAN	Personal Area Network
PC	Personal Computer
PCB	Print Circuit Board

PHY	Physical
PPE	Personal Protective Equipment
PU	Primary User
QFN	Quad-Flat No-Lead
QoS	Quality of Service
RAP	Resource Allocation Problem
RF	Radio Frequency
RFD	Reduced-Function Device
RFID	Radio Frequency Identification
RS	Register Select
RSSI	Received Signal Strength Indication
RTC	Real-Time Clock
RTF	Reader Talk First
RTS	Request-to-Sent
R/W	Read/Write
SCADA	Supervisory Control and Data Acquisition
SCL	Serial Clock Input
SDA	Serial Data Input/Output
SoC	System on Chip
SHR	Self-Healing Ring Network
SM	Smart Meter
SMS	Smart Metering System
SPI	Serial Peripheral Interface
SRAM	Static Random Access Memory
SRAM	Static Random Access Memory