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Inventor(s)	:	**Clarke W. McAllister**
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U.S. CONTINUATION PATENT APPLICATION TRANSMITTAL

Enclosed herewith please find the following:

1. **91** sheets of Specification, **5** sheets of Claims and **1** sheet of Abstract.
2. **19** sheets of Drawings.
3. **5** sheets of Preliminary Amendment.
4. **1** Sheet of Executed Declaration
5. **8** sheets of Data Sheet PTO/AIA/A14 Form.

Priority Claim:

The present application is a Continuation of pending U.S. Patent Application Serial No. 13/526,520 filed on June 19, 2012; which is a Continuation-In-Part of U.S. Patent Application Serial No.12/820,109 filed on June 21, 2010, now U.S. Patent No. 8,228,198; which is a Continuation-In-Part of U.S. Patent Application Serial No. 11/465,712 filed on August 18, 2006, now U.S. Patent No. 7,830,258; which claims priority to U.S. Provisional Application Serial No. 60/709,713 filed on August 19, 2005; and U.S. Patent Application Serial No.12/820,109 filed on

SML Exhibit 1003 - Page 1

June 21, 2010 is a Continuation-In-Part of 12/124,768 filed on May 21, 2008; which claims priority to U.S. Provisional Application Serial No. 60/939,603 filed on May 22, 2007.

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TOTAL CLAIMS	20 - 20 =	0	$80.00	$0.00
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Respectfully submitted,

Date: February 12, 2016

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SYSTEMS, METHODS, AND DEVICES FOR COMMISSIONING WIRELESS SENSORS

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RELATED APPLICATIONS

The present application is a continuation-in-part application based on U.S. Patent Application Number 12/820,109 filed on 21 June 2010, which claims benefit claims benefit under 35 USC Section 119(e) which is a continuation-in-part application based on U.S. Patent Application Number 11/465,712 (US 7830258) filed on 18 August 2006, which claims benefit under 35 USC Section 119(e) of U.S. Patent Application number 60/709,713 filed on 19 August 2005, and a continuation-in-part of U.S. Pat. App. No. 12/124,768 (abandoned) filed on 21 May 2008, which claims benefit claims benefit under 35 USC Section 119(e) of U.S. Provisional Patent App. No. 60/939,603 filed on 22 May 2007, all by the same inventor Clarke W. McAllister. The present application is based on and claims priority from these applications, the disclosures of which are hereby expressly incorporated herein by reference.

BACKGROUND

The present invention relates to a system, including methods and devices, utilizing wireless sensor devices and RFID (radio-frequency

identification) transponders. Specifically, the present invention relates to a system incorporating novel devices and methods that enable point-of-use and on-demand commissioning of RFID transponder-equipped wireless sensors.

Radio-frequency identification (RFID) transponders enable improved identification and tracking of objects by encoding data electronically in a compact tag or label. And, advantageously, the compact tag or label does not need external, optically recognizable or human-readable markings. In fact, using the Gen2 EPC specification, a three-meter read-distance for RFID transponders is common – even on high-speed material handling lines.

Radio-frequency identification (RFID) transponders, typically thin transceivers that include an integrated circuit chip having radio frequency circuits, control logic, memory and an antenna structure mounted on a supporting substrate, enable vast amounts of information to be encoded and stored and have unique identification. Commissioning, the process of encoding specific information (for example, data representing an object identifier, the date-code, batch, customer name, origin, destination, quantity, and items) associated with an object (for example, a shipping container), associates a specific object with a unique RFID transponder. The commissioned transponder responds to coded RF signals and, therefore, readily can be interrogated by external devices to reveal the data associated with the transponder.

Current classes of RFID transponders rank into two primary categories: active RFID transponders and passive RFID transponders. Active RFID transponders include an integrated power source capable of self-generating signals, which may be used by other, remote reading devices to interpret the data associated with the transponder. Active transponders include batteries and, historically, are considered considerably more expensive than passive RFID transponders. Passive RFID transponders backscatter incident RF energy to specially designed remote devices such as interrogators.

Combining the benefits of the latest technology in RFID transponders with sensing devices, a broader class of devices called wireless sensors is emerging. Wireless sensors have a unique identity, sense one or more attributes within its environment, and report its identity and data corresponding to the sensed attributes. For example, a wireless sensor interprets environmental conditions such as temperature, moisture, sunlight, seismic activity, biological, chemical or nuclear materials, specific molecules, shock, vibration, location, or other environmental parameters. Wireless sensors are distributed nodes of computing networks that are interconnected by wired and wireless interfaces.

Wireless sensors, made using silicon circuits, polymer circuits, optical modulation indicia, an encoded quartz crystal diode, or Surface Acoustic Wave (SAW) materials to affect radio frequency or other signaling methods,

communicate wirelessly to other devices. For example, certain embodiments of wireless sensors communicate on a peer-to-peer basis to an interrogator or a mobile computer. Communication methods include narrow band, wide band, ultra wide band, or other means of radio or signal propagation methods.

Generating a unique serial number is imperative, and is required for EPCglobal RFID tagging implementations. Serialization requires a central issuing authority of numbers for manufacturers, products, and items to guarantee uniqueness and to avoid duplication of numbers. Blocks of numbers are distributed to remote locations globally. Unless a product (or SKU) is serialized at one location, the numbering space is usually partitioned according to some method, or each remote location receives each number one-by-one. Either way, there is eventually a reconciliation of serial number usage with a granularity of either one or several numbers at a time.

A preferred method of generating unique serial numbers is to assign unique numbers in a central location, such as in a label converter facility where unique bar coded labels are printed. Each unique label is then packed and shipped to remote locations, usually either in sheets or rolls. Upon arrival at a manufacturing facility, rolls are loaded onto high speed label applicators that apply one serialized label onto each carton. As those serialized cartons move through the supply chain, they may eventually arrive at a case pick location, a receiving dock, or similar location where a serialized carton is selected for having

an RFID transponder applied to it. Using a bar code scanner to read one or more bar codes sufficient information can be collected to uniquely encode that data into an RFID transponder and apply it to that carton.

The uniqueness of an identifier is critical to the success of almost any tracking system. Assuring uniqueness is not necessarily simple. A generically descriptive bar code can be matched to authorizations for selected numbering systems that provide additional data fields including a unique serial number or using algorithms that assure uniqueness through numerical representations of time and space.

Certain prior art systems use printer encoders to merge the printing and RFID transponder encoding operations into a single atomic transaction. This method is more expensive in every respect. It requires mobile distributed printing with nearly perfect networking implementations in order to achieve a smooth, easy, and regular manual transponder application process. This all comes at a higher price, size, and weight. Prior art implementations tend not to be mobile, as represented by U.S. Patent No. 7,066,667 issued to Chapman et al. on 27 June 2006 and include U.S. Patent No. 5,899,476 issued to Barrus et al. on 31 May 2005, or by U.S. Patent No. 6,246,326 issued to Wiklof et al. on 12 June 2001, describe a device that commissions an RFID transponder with a printed label. This approach, however, introduces unnecessary waste, cost, and propensities for error. There is a growing category of applications that do not

require anything other than a custom-encoded RFID transponder. This prior art calls for the inclusion of label printer hardware and related consumable materials that are not necessary for many RFID applications. Unneeded printer mechanisms create unnecessary complexities, size, and weight. In some instances this additional bulk hinders practical mobile applications. The result is that tagging solutions that include printing result in a higher total cost of ownership than a pure RF tag encoding system.

So, despite recent advances in RFID technology, the state-of-the-art does not fully address the needs of simple, efficient, economical, high-volume, reliable deployment and commissioning of RFID transponders and wireless sensors. Large-scale adoption of RFID transponders depends on systems utilizing reliable, low-cost transponders deployed at thousands of distributed locations that implement simple and efficient manual transponder commissioning means. Such systems should further include processes for efficient commissioning of batches of RFID transponders, without the need for realtime wireless connectivity.

SUMMARY OF THE INVENTION

The present invention overcomes the shortcomings of the prior-art attempts and, accordingly, provides systems, methods, and devices that commission RFID transponders on-demand and at a point-of-use utilizing wireless data transfer in a compact package that is well-suited to portable, mobile, or fixed use in multiple applications. The present invention is used for reading data from or encoding data onto wireless transponder data carriers with no external authorizations or queries required on a transponder-by-transponder basis. Additionally this invention teaches a preferred method and apparatus for commissioning RFID transponders without requiring continuous use of a screen or keypad to control operations. Further advantages of the present invention will be well-appreciated by those skilled in the art upon reading this disclosure including the appended figures of the drawing.

Authorizations for one or more classes of objects are preferably loaded into the encoder; where such authorizations include data fields such as manufacturer ID, item reference, manufacturer code lengths, filter values (that designate packaging levels such as item, case, pallet, etc.), serial number starting point for a block, and other pre-determined parameters. Such information is preferably loaded into the memory of the encoder in advance of tag commissioning operations. Thus if loaded with information for more than one

object class, the encoder does not have sufficient information to proceed with encoding a transponder until a single object class is selected for the present RFID transponder to receive; an ambiguity therefore exists that is preferably resolved with information entered by an operator using either a keypad or a bar code scanner. Reading printed indicia such as a bar code is a preferred method to resolve the ambiguity as to which object class the next RFID transponder is to receive a number from. Bar codes are used to eliminate errors and ambiguities that enable the encoder to locally generate or replicate data for encoding into a data carrier such as an RFID transponder.

This type of data production and/or replication process is very fast and efficient. There is no absolute need to query a database in real time; hence there is no need for continuous wireless network connectivity. This simplification eliminates the possibilities for non-deterministic network delays. Non-deterministic delays are delays that cannot be guaranteed, usually due to the probabilistic nature of packet collisions that are common in Ethernet and WiFi. By eliminating the need to access a network database, the variable non-deterministic delays caused by changing database sizes, changing record counts, and database user load fluctuations are completely circumvented. Reduction or outright elimination of non-deterministic delays helps manual labor operate at maximum efficiency, allowing them to achieve a regular and dependable cadence in their transponder application processes.

For example, in one embodiment the present invention consists of an encoder for commissioning RFID transponders. The encoder consists of an RFID interrogator module adapted to enable encoding predetermined data according to a commissioning algorithm and communicating with an internal antenna, the antenna being adapted to encode the predetermined data on the RFID transponder; a memory storage device for storing at least a portion of the predetermined data; a processing means for controlling and communicating with the memory storage device, the RFID interrogator and the internal antenna; a means for providing a supply of RFID transponders, the transponders configured for tensile extraction from the encoder or, preferably from means for providing a supply of RFID transponders comprising a cartridge; and a means for presenting the RFID transponder within an operable range of the internal antenna or near field coupler to enable encoding of the predetermined data.

In further embodiments, the present invention includes a method for commissioning RFID transponders comprising: providing a roll or sheet of RFID transponders; providing a cartridge or other pre-packaged self-contained supply of RFID transponders; providing an encoder; inserting the roll or sheet in the cartridge or other pre-packaged self-contained supply of RFID transponders; coupling the cartridge to the encoder; acquiring information to encode from printed indicia; encoding the information on at least one RFID transponder; and

adapting the process of attachment of the encoded transponder to the target surface along a vector that is nearly parallel to the target surface based upon real time feedback from the surrounding environment.

DRAWINGS

Fig. 1 is a block diagram of the system and environment according to one embodiment of the present invention.

Fig. 2 is a top view of a possible RFID transponder according to one embodiment of the present invention.

Fig. 3 is a schematic end-view of the RFID transponder of Fig. 2.

Fig. 4 is a top view schematic drawing of a sheet or roll of a plurality of RFID transponders of Fig. 3.

Fig. 5 is an offset orthogonal view of a mobile encoder according to one embodiment of the present invention.

Fig. 6 is a schematic block diagram showing some components of the mobile encoder of Fig. 5.

Fig. 7 is a schematic cross section view showing electro-mechanical components of one embodiment of a mobile encoder.

Fig. 8 is a schematic cross section of an encoder according to the present invention.

Fig. 9 is a frontal-offset view of a hand-held, mobile encoder according to the present invention.

Fig. 10 is a schematic cross section of another encoder according to the present invention.

Fig. 11 is a flow chart of a smartphone scan and transponder encode method according to the present invention.

Fig. 12 is a flow chart of a tagging method according to the present invention.

Fig. 13 is a flow chart of a commissioning method according to the present invention.

Fig. 14 is a diagram of a serialization method according to the present invention.

Fig. 15 is a system block diagram according to the present invention.

Fig. 16 is a flow chart of a biometric authentication method according to the present invention.

Fig. 17 is a block diagram of the system and environment according to one embodiment of the present invention.

Fig. 18 is a top view of a possible RFID transponder according to one embodiment of the present invention.

Fig. 19 is a material stack specification of an RFID transponder according to one embodiment of the present invention.

Fig. 20 is a side view of a web of release liner containing RFID transponders, provided on a source roll, stretched tight around a peel device, and

advanced forward onto a take-up reel according to one embodiment of the present invention.

Fig. 21 is a side view of a handheld mobile encoder with an integrated bar code scanner according to one embodiment of the present invention.

Fig. 22 is a diagram of a smartphone with FIPS 140-2 module and near field couplers according to one embodiment of the present invention.

Fig. 23 is a flow chart of a first method according to the present invention.

DESCRIPTION OF THE INVENTION

Making reference to various figures of the drawing, possible embodiments of the present invention are described and those skilled in the art will understand that alternative configurations and combinations of components may be substituted without subtracting from the invention. Also, in some figures certain components are omitted to more clearly illustrate the invention. In some figures similar features share common reference numbers.

To clarify certain aspects of the present invention, certain embodiments are described in a possible environment – as identification means for containers. In these instances, certain methods make reference to containers such as loaded pallets, paperboard boxes, corrugated cartons, pharmaceutical containers, and conveyable cases, but other containers may be used by these methods. Certain embodiments of the present invention are directed for use with steel drums, commercial corrugated shipping cartons, tagged pallet-loads of shrink-wrapped cases, consumer-goods packaging, consumer goods, automobile windshields, industrial components, or other methods of identifying objects using RFID transponders or wireless sensors, or both. In certain embodiments the target surface to which a transponder will be attached is a container. In some applications the target surface is moving while the encoder device is stationary. Furthermore the moving target surface may be objects on a conveyor. In yet other embodiments the target surface may be a web of release liner from which

encoded transponders will be later removed and applied to an object for identification.

Some terms are used interchangeably as a convenience and, accordingly, are not intended as a limitation. For example, transponders is a term for wireless sensors that is often used interchangeably with the term tags and the term inlay, which is used interchangeably with inlet. This document generally uses the term tag or RF tag to refer to passive inlay transponders, which do not include a battery, but include an antenna structure coupled to an RFID chip to form an inlay which is generally thin and flat and substantially co-planar and may be constructed on top of a layer of foam standoff, a dielectric material, or a folded substrate. One common type of passive inlay transponder further includes a pressure-sensitive adhesive backing positioned opposite an inlay carrier layer. However, certain aspects of the present invention work equally well with active inlay transponders. A third type: a battery-assist tag is a hybrid RFID transponder that uses a battery to power the RFID chip and a backscatter return link to the interrogator. Further, this document uses programmable RFID transponders interchangeably with RFID transponders. Programmable transponders enable data to be written or stored more than once.

Suitable environments or applications for certain aspects of the present invention include: traditional conveyor line or other high-speed machinery with

automated transponder printing, encoding, and attachment; hand attachment of transponders (a method that often is referred to as "slap and ship"); and a novel category of mobile transponder encoders (as will be more fully described herein); shipside receiving of automobiles; case picking operations that include selective tagging process steps; and receiving untagged cartons into an RFID-enabled retail store or a manufacturing plant.

The systems, methods, and devices of the present invention utilize an RFID transponder or wireless sensors as a component. Certain RFID transponders and wireless sensors operate at Low Frequencies (LF), High Frequencies (HF), Ultra High Frequencies (UHF), and microwave frequencies. HF is the band of the electromagnetic spectrum that is centered around 13.56MHz. UHF for RFID applications spans globally from about 860MHz to 960MHz. Transponders and tags responsive to these frequency bands generally have some form of antenna. For LF or HF there is typically an inductive loop. For UHF there is often an inductive element and one or more dipoles or a microstrip patch or other microstrip elements in their antenna structure. Such RFID transponders and wireless sensors utilize any range of possible modulation schemes including: amplitude modulation, amplitude shift keying (ASK), double-sideband ASK, phase-shift keying, phase-reversal ASK, frequency-shift keying (FSK), phase jitter modulation, time-division multiplexing (TDM), or Ultra Wide Band (UWB) method of transmitting radio pulses across a very wide spectrum of frequencies spanning

several gigahertz of bandwidth. Modulation techniques may also include the use of Orthogonal Frequency Division Multiplexing (OFDM) to derive superior data encoding and data recovery from low power radio signals. OFDM and UWB provide a robust radio link in RF noisy or multi-path environments and improved performance through and around RF absorbing or reflecting materials compared to narrowband, spread spectrum, or frequency-hopping radio systems. Wireless sensors are reused according to certain methods disclosed herein. UWB wireless sensors may be combined with narrowband, spread spectrum, or frequency-hopping inlays or wireless sensors.

SYSTEM AND ENCODER OVERVIEW

Referring to Fig. 1 the present invention includes a system for commissioning wireless sensors at a point of use and on-demand. For example, in one embodiment, the present invention incorporates a mobile encoder device 30, which may be attached to a belt of an operator and powered by rechargeable batteries 60. The mobile encoder is in wireless communication with a remotely located host computer. The operator can selectively (on-demand) enable the mobile encoder to commission a transponder based on various criteria, including input received from a mobile bar code scanner, for example.

Figure 1 shows one system 10 according to the present invention in a typical environment, such as a packaging facility wherein a collection of

entities with visual external labels 15 exist and a sub-set (or all entities) need to be associated with a wireless RFID transponder, tag, or label. The object 17 needing an RFID transponder could be a packing container having an assorted collection of entities 15. As entities 15 are pulled from collection 176, a traditional optical reader 13 (human or machine) interprets the visual external label. Information from the external, visual label is correlated to information stored in a centralized location, represented by a network computer 11 having a database. The information taken by the optical reader 13 is transmitted to the network computer 11. System 10 includes a wireless connection between the remote computer 20 and the mobile encoder 30 either directly or through a common wireless access point. Additionally, a wireless connection could occur between the remote computer 20 and the host computer 11, and in this embodiment, the remote computer 20 is in physical connection with the mobile encoder. In yet another embodiment, the remote computer 20 wirelessly connects to both the mobile encoder 30 and the host computer 11. Optionally, the optical reader 13 can be incorporated in the encoder 30.

Referring to Figs. 3 and 4, in further embodiments, the present invention incorporates a mobile encoder device 175, 30, or 220 which may be held in the hand of an operator. Mobile encoder device 175, 30, or 220 is preferably powered by rechargeable batteries or a fuel cell. System 170 includes at least four possible intermittently connected entities if they are present and connected:

mobile encoder 175, remote computer or mobile phone 154, optical reader 173, and headset 174. A preferred short range wireless connection means 175A such as a WLAN (Wireless Local Area Network) or PAN (Personal Area Network) may be established from time to time between mobile encoder 175 and remote computer or mobile phone 154, optical reader 173, and/or headset 174. There is a preference for low power wireless connection apparatus within mobile encoder 175 so as to realize the greatest possible battery life in light weight mobile encoder 175. Mobile encoder 175, 30, or 220 is in intermittent wireless communication with a mobile phone or computer 154 typically at close range through wireless communication means 175A. Database and associated host computer 171 may be housed at a remotely located facility that may optionally be accessed over a large distance through remote computer or mobile phone 154. A mobile phone is a preferred bridge between two or more wireless networks, for example a PAN and a wireless subscriber network that supports wireless data services for ultra mobile and remote tagging applications. Continuous wireless connection to a host database is not required for ongoing tag commissioning process steps disclosed herein.

RFID tags such as those using EPCglobal numbers requires uniqueness of the numbers that are encoded. GS1 is a central authority that prescribes a set of hierarchies for each key type (type of identity such as an SGTIN) whereby GS1 designates itself as the central issuing authority for each key type. Authority is

passed down in a hierarchical manner to member companies. Each member company has the authority to further allocate numbers from its upper level database to as many lower database levels as it deems necessary to distribute number authority throughout its enterprise.

Quasi-autonomous RFID transponder encoding authority is achieved when an external number issuance authority allocates to the encoder blocks of numbers for specific object classes. A preferred embodiment for quasi-autonomous transponder encoding authority is realized when large pre-authorized blocks of serial numbers are made available to encoder 175 or 30 to utilize on object classes as objects of a class are presented for tagging. A preferred method of providing pre-authorized blocks of object class serial numbers is to subdivide the entire object class serial number space into sectors that are defined by a limited number of MSB's (Most Significant Bits) of the serial number field. The object class serial number space is defined by the number of serial number bits that are used in a specific standard, such as a particular EPCglobal key type, for example an SGTIN-96 and is defined in a corresponding specification such as the GS1 EPCglobal EPC Tag Data Standard. Again using the SGTIN-96 as an example, there are a total of 38 bits used to define the entire serial number space which contains 2^{38} unique numbers. For example the upper 14 bits could be designated as the most significant bits for a particular embodiment. In that case the object class serial number space would be comprised of 16,384 sectors.

Since in this example there are 14 most significant bits within a 38 bit serial number field, there must be 38 minus 14 bits of lesser significance, which equals 24 bits. Therefore the lower 24 bits represent 16,777,216 unique serial number values. Once a sector is allocated to a lower level within an authority hierarchy, it is referred to as a block. Each allocated block of serial numbers represents authority for encoding objects of an object class that can either be used by an encoder for encoding transponders, or allocated to a lower level in the authority hierarchy.

In a preferred embodiment serial number block sizes are sufficient to operate encoder 175 or 30 for extended periods of time without any further external authorization steps. For example autonomous operation for a week or more is possible with sufficiently large block sizes. In the previous example the encoder could encode over 16 million objects of an object class without the need to reconnect with a higher level authority. If 10,000 objects of an object class are encoded each day, then the encoder could operate in a quasi-autonomous mode for up to 1677 days or over four years without receiving further authorizations from a higher level authority. Block allocations are preferably assigned with reference to how many encoders 175 or 30 are authorized to operate within the facilities of the owner of certain object class numbers.

Authorizations for one or more classes of objects are preferably loaded into encoder 175, 30, or 220 from an external authority where such

authorizations include data fields such as manufacturer ID, item reference, manufacturer code lengths, filter values (that designate packaging levels such as item, case, pallet, etc.), serial number starting point for a block, and other pre-determined parameters. Such information is preferably loaded into the memory of the encoder in advance of tag commissioning operations. Thus if loaded with information for more than one object class, encoder 175, 30, or 220 does not have sufficient information to proceed with encoding a transponder until a single object class is selected for the present RFID transponder to receive; an ambiguity therefore exists that is preferably resolved with information entered by an operator using either a keypad or a bar code scanner. Reading printed indicia such as a bar code is a preferred method to resolve the ambiguity as to which object class the next RFID transponder is to receive a number from. Bar codes are used to eliminate errors and ambiguities that enable encoder 175, 30, or 220 to locally generate or replicate data for encoding into a data carrier such as an RFID transponder.

GS1 is a leading global organization dedicated to the design and implementation of global standards and solutions to improve the efficiency and visibility of supply and demand chains. GS1 defines EPCglobal SGTIN number fields as having a company prefix, an item reference, a partition value, and a filter value that comprise the object class information. A unique serial number is then added to that information to create each unique instance within each object class.

In a preferred embodiment, a block is allocated and managed using three numbers: a starting number that is the first serialized instance of a block, a block size which represents the total number of instances in the block, and a counter or index that represents how much of the block has been used during an encoding process. Using these three numbers and an optional lock bit, a simple database of object class authorizations can be built.

A preferred embodiment utilizes RFID authorization transponder 178A and a printed substrate 178B to physically handle object class serial number issuance authorizations. Authorization transponder 178A is interrogated by transponder reading/encoding means 175H. Preferred embodiments use the 96-bit EPC memory bank for specifying the block starting number, including the company prefix, item reference, partition value, filter value, and base serial number. The User Memory bank is used to hold and transfer the block size (preferably 16-bits), counter or index value (preferably 16-bits), a 16-bit header to identify the transponder as a valid member of a class of authorization transponder, a lock bit, and a CRC value to detect errors in all of the data fields. For example a CRC error would detect errors in storage, transponder selection, or data transmission. In preferred embodiments reading of data blocks from more than one RFID transponder would be avoided by selecting a transponder, checking that it is the correct type, contains valid authorization data, contains a valid header that

signifies that it is an RFID authorization transponder 178A, and that all data read correctly verifies with a dedicated error detection field such as a CRC.

RFID authorization transponder 178A is preferably adhered to printed substrate 178B so that an operator can visually identify what object class or SKU is managed by the affixed authorization transponder 178A. A picture, icon, bar code, or human readable symbols are all useful for identifying the object class. An operator presses a button or scans a bar code that prompts encoder 175 to read and store the tagging authorization held by authorization transponder 178A. Once read, authorization transponder 178A is preferably electronically marked as 'consumed' or 'locked' by transponder encoding means 175H. EPC transponder ID fields that identify a specific type of chip are preferred for selecting the proper transponder, even when other RFID transponders are within range of the antenna or near field coupler of transponder encoding means 175H.

A collection of authorization transponders 178A comprises a database that can be physically transported without the need for a wireless communications link to encoder 175. Once read, database records are preferably stored in internal memory means 175G. In a preferred embodiment 12 to 14 bytes of Flash memory is used for each record to allocate 250 to 65536 instances of an object class, whereby the first byte of an EPC number is a fixed header value can be replaced in Flash memory by 8 bits of the allowable block size. One or two bytes in RAM are used to count or index through the block

allocation as it is used. Thousands of data records of this type can easily fit into the memory space of an economical 8-bit microcontroller. In a preferred embodiment, where the GS1 SGTIN-96 header is replaced in memory with an 8-bit block size authorization, 300 records for authorizing up to 255 instances per record, can be used to safely manage at least 500,000 tagging records using 24,000 bytes of Flash memory and 2000 bytes of RAM. Other embodiments using more bits to authorize and control larger blocks of numbers is possible at a slightly larger expense of memory.

A preferred embodiment uses a computer, preferably a smartphone such as an iPhone from Apple Inc. of Cupertino, CA as a lower database level to transfer encoding authorizations from upper level database authorities to RFID encoders. A smartphone such as the iPhone or an Android phone using software from Google would be a preferred embodiment of a lower database level and or an encoder using an antenna or near field coupler similar to near field coupler 224A2 of Fig. 21 or 238a or 238b of Fig. 22 to couple with RFID transponders for encoding and verification. The iPhone also has cellular data transmission radios and software stack to enable the iPhone to access remotely located servers in a cloud computing architecture.

The smartphone establishes a connection with a cloud-based server using JavaScript, ASP, JSP, PHP, Perl, Tcl or Python scripts to access a database such as mySQL that is available from Oracle Corporation of Redwood Shores, CA. Using

structured query language, SQL database tables are preferably used to store tag commissioning data, configuration information, and serial number block allocation records. SQL queries provide information from database tables to the script, passing the result over the Internet, to the smartphone, which also then routes information to designated RFID encoders. Encoders are preferably identified by their media access control (MAC) address or a UUID which is guaranteed to be unique and is used by the smartphone as a lower database level to transfer encoding authorization to a specific encoder.

Preferred embodiments of encoder 175, 30, or 220 will encode all of the GS1 identity types. Such types include the General Identifier (GID-96), Serialized Global Trade Item Number (SGTIN), Serial Shipping Container Code (SSCC), Serialized Global Location Number (SGLN), Global Returnable Asset Identifier (GRAI), and the Global Individual Asset Identifier (GIAI). Other preferred embodiments are used to encode numbers that are a part of other numbering systems.

Data records are preferably loaded and stored through commands that are transmitted over wireless communication means 175A. In preferred embodiments, batch mode commands can be used in any of three ways: (1) to immediately affect the current operation by starting a batch tagging process for

a specified SKU or object class; (2) to store authorizations in memory means 175G; and (3) to store authorizations in stored-value RFID transponder 178A.

When external connection is necessary, wired or wireless communication with an external host or numbering authority is established. Wireless communication means 175A is preferably a Wi-Fi or Bluetooth connection. A wireless node of a Bluetooth personal area network is used according one embodiment of the present invention. Model 100-SER manufactured by EmbeddedBlue of Poway, California and the BISMS02 from EZURiO Ltd., a subsidiary of Laird Technologies, Inc. of Chesterfield, Missouri are examples of preferred OEM Serial Bluetooth modules. Other wireless interfaces may alternatively be used to achieve Serial Port Profile and other types of connectivity between encoder 175 and remote computer or mobile phone 154 and/or optical reader 173.

Other preferred embodiments of mobile encoder 175 and system 170 replace wireless communication means 175A with a cable, resulting in an embodiment of mobile encoder 175 with a tethered bar code scanner. A key advantage of an alternative embodiment of system 170 that utilizes a wired connection to optical reader 173 instead of wireless communication means 175A is a very simple solution having virtual immunity to any surrounding RF interference that might raise the noise floor hindering wireless communications.

The operator can cause mobile encoder 175, 30, or 220 to commission a transponder by scanning certain printed bar code symbols received through optical reader 173 which is connected to encoder 175 through wireless communication means 175A. Or alternatively internal optical reader 175F is used to scan printed bar code symbols. In either case data from optical reader 173 or 175F is delivered to processing means 175B. Certain preferred embodiments of system 170 use optical scanners with self-contained symbol decoding capabilities to deliver decoded symbol information to processing means 175B. Certain other embodiments of system 170 relies on processing means 175B to conduct some or all decoding operations to derive information from scanned symbols.

The information derived from the optical reader 173 or 175F is used by mobile encoder 175 to either directly or indirectly encode data into RF transponder 178 while it is still physically within mobile encoder 175. Mobile encoder 30 uses external optical reader 173, and alternatively mobile encoder 220 uses internal optical reader 175F, as embodied in reader 226 of Fig. 21. Preferred embodiments of optical reader 226 are mechanically aligned relative to transponder encoding means 175H or more specifically with the antenna or near field coupler of RFID interrogator 224A. Spatial alignment assures that an operator will be able to comfortably scan bar codes and then encode and apply RFID transponders along a line of movement such that the operator can easily assure proper placement of encoded transponders.

Symbol decoding functions may be physically, electrically, or logically separated from symbol scanning operations. One preferred embodiment of optical reader 173 is a model CHS-7M, CHS-7P, CRS-9M or CRS-9P Bluetooth ring scanner.

Processing scanned commands involves a processing step to determine that a bar code should be interpreted as a command or configuration instructions rather than as bar code 179 that identifies an object that is to be tagged. Commands are used to alter the flow and operation of mobile encoder 175.

Fig. 21 is a preferred embodiment of a mobile encoder wherein optical reader 226 is an OEM bar code scanner manufactured by such companies as Intermec or Motorola and is a preferred embodiment of optional internal optical reader 175F shown in Fig. 17.

In a preferred embodiment one or more bar codes are pre-printed and applied as symbol 179 on entity 177 in a manufacturing facility or other suitable location. Such bar codes are described in ISO/IEC draft document PDTR 24729-1 and are more generally referred to as one or more bar codes having Application Identifiers (AI) 01 and 21 encoded into them, and preferably include header information and other control bits that are required for certain protocols. AI 01 is used to represent the Stock Keeping Unit (SKU) as a GS1 Global Trade Item Number (GTIN). AI 21 is used to serialize the SKU. Together the two AI's are used to specify a GS1 serialized GTIN (SGTIN). Bar codes can also be used to

specify data payloads that use numbering systems other than the EPC numbering system. The Application Family Identifier (AFI) also plays an important role in designating alternative numbering authorities.

This preferred method that is described by the flow chart in Fig. 23 will allow batch mode operation where there are at best intermittent connections with remote computer 154. This preferred method allows existing label application and/or printing hardware located on existing manufacturing lines to provide in printed symbolic form all data that would be encoded into an RF transponder. By providing printed symbols, manufacturers do not have to incur either the cost of that transponder or the special equipment that is required to encode and apply RF transponders.

Optical reader 173 or 226 is described above and is used as the primary source of real time data input for the mobile encoding system that uses an embodiment such as mobile encoder 30 or 220. Optical reader 173 or 226 is also preferably used to scan special bar codes that instruct mobile encoder 175, 30, or 220 to perform certain prescribed functions which will be described below.

Certain preferred embodiments of system 170 include headset 174 which may be a headset worn by the operator or a Bluetooth-linked loud speaker that is mounted to a pallet jack or fork lift truck. Headset 174 is optionally used by system 170 to give instructions, confirmation signals, or warnings to the

operator. Synthesized speech or audible tones are used to interact with the operator through headset 174.

In these aforementioned embodiments, the mobile encoder 30 is a portable device that can be easily mounted in a fixed location, carried such as mobile encoder 220, or worn by a human operator such as mobile encoder 30, or hung from a suspended retractable tool cable. As such, the mobile encoder 30 includes an internal power source 175E such as a rechargeable lithium-ion battery and would further include a handle or a belt-clip for ease of use. In another embodiment, the mobile encoder can be attached to a high-speed conveyor line. In such an application, the on-board battery could be replaced or augmented by a physical connection to a remote power source. Further, the computer 20 could have wired connects to the host network 11. Further details of possible configurations of the mobile encoder will be further detailed in subsequent sections of this disclosure.

In the system 10 of Figure 1, the mobile encoder 30 carries a supply of un-commissioned (or blank), or securely encodable RFID transponders 175J, 185, 42, or 221E. Once the desired data is accumulated and presented to the encoder 30 from the computer 20, the encoder commissions an RFID transponder, using transponder transport means 175C and transponder encoding means 175H and any one of several preferred encoding algorithms to program, creating an RFID tag or label 50 for the object 177. Transponder

separation means 175D is used to separate a properly encoded transponder 178 from release liner conveyance web 182 by breaking the bond at adhesive layer 181D on the leading edge of transponder 178. Transponder separation means 175D is preferably a peel device 183 as shown in Fig. 20 or peel device 222B in mobile encoder 220. Peel devices 183 or 222B are preferably made from anti-static plastic, metal, or other material that will conduct electrostatic charge away from transponder 178 and release liner 182. The commissioned tag or label 50 can then be applied, linked, or otherwise associated with the object by known means including a human operator or a machine transfer.

RFID TRANSPONDERS

Figure 2 shows a preferred embodiment of an RFID transponder 50. RFID transponders, in some embodiments, comprise an RFID integrated circuit (IC) device (or "chip") 56 of Fig. 3 or 180 of Fig. 18 bonded to an antenna apparatus, formed on a substrate that is often plastic such as Mylar®, polyester, or PET. One way to form an antenna structure is to etch copper from a substrate. An alternate printed transponder includes printing multiple layers of conductive ink onto a substrate. One additional method includes stamping UHF antennae from thin sheets of aluminum, or by selective aluminum deposition onto a substrate. In certain embodiments, RFID transponders and wireless sensors are recovered from waste streams for reconditioning, reprogramming, and reuse.

Other suitable RFID transponders include designs that combine a dielectric spacer behind the antenna by separating the metallic antenna inlay 181C from surrounding metals that may detune it, or liquids that may absorb RF energy from it. The dielectric spacer creates a transponder that performs well over a broad range of packaging conditions. The dielectric material is a foam standoff material or an expanding mechanical structure that provides lift from the target object and also a more robust design also includes features to protect the transponder from damage.

In certain embodiments, the RFID transponder is both programmable and mechanically configured for tensile extraction from a protective enclosure.

In preferred embodiments, hundreds or thousands of instances of RFID transponder 178 are manufactured on a continuous web of flexible material with a spatial separation between them, preferably at regular intervals. Certain preferred embodiments use adhesive-backed transponders 178 adhered to release liner 182 as shown in Fig 20, while other embodiments use the transponder material as its own conveyance that is severed from the rest of the web at predetermined locations, preferably after encoding and verifying transponder 178 is properly functioning.

In preferred embodiments of the present invention, the face stock material has a physical outline that is not much larger than the physical outline of the inlay itself. This is in contrast to labels which can have at least twice the

surface area of the inlay or a direct-printed antenna structure in order to provide space for printed information. By having a label outline that is so much larger than the inlay surface area, there are a many possible combinations of inlay placement within the boundaries of a large printable label. This creates a problem and a challenge for printer/encoders that have to find and locate an inlay before attempting to encode it. By contrast, the present invention uses the detectable optical characteristics of the tag's minimal physical outline to position the transponder for encoding. This transponder positioning method is superior and an improvement over prior art that uses printed label stock as a carrier for RFID inlays wherein the physical dimensions of printed labels are not in any way a reliable indication of the location of the RFID inlay within the label. This is another example of how demand label printing further complicates RFID transponder encoding.

In one embodiment that is an exception to the minimal outline transponder design and positioning method described above, transponders that have a very long physical shape can be used to create a loop to secure an encoded transponder to a tree, a bush, or the handle of a piece of luggage. Preferred embodiments of such transponders are folded or rolled in order to package them onto a dispensing roll or packaged into a magazine or cartridge in a fan fold pattern. The resulting bundle of back-and-forth 'Z' folded or fan folded face stock material results in a compact package that minimizes the amount of release liner

that needs to be wasted for each tag. Each z-folded transponder is then easily encoded and dispensed from encoder 175, 30 or 220. Transponders that can be encoded, verified, dispensed, and unfolded are advantageously used in forestry, ornamental nurseries, and airline baggage tracking applications where manual tagging is required.

In another embodiment, transponder 178 is pushed out of encoder 175 instead of being pulled out through tensile extraction. A transport mechanism for pushing transponders utilizes a gripping method such as friction or teeth that penetrate the webbing. Although there is a risk of jamming or mutilating the webbing, the advantage is that there is no need for a release liner to pull the transponder supply through encoder 175 using tensile extraction. A preferred 'tractor feed' embodiment mitigates the risk of web mutilation by utilizing a regular pattern of precut holes along one or both edges of the webbing, into which cog members of a drive mechanism engage to advance the webbing. A tractor feed embodiment is part of Transponder Transport Means 175C of Fig 17 whereby a motor and gear train delivers drive torque to the web through friction rollers, penetrating teeth, cogs, or other mechanical engagement means. In such an embodiment, the preferred transponder separation means is a web cutter that is used to separate encoded transponders from unencoded tags. A web cutter can be either active or passive, in other words cutting force can originate with a motorized mechanism or with an operator's handling during dispensing and

transponder detachment. A row of plastic or metal saw teeth is a preferred embodiment of a passive transponder separation device.

In another preferred embodiment, transponder 178 is manufactured on a high speed press, a bar code is printed onto face stock of transponder 178 and information that is representative of that bar coded information is also encoded into microchip 180. Then encoder 30 or encoder 220 preferably read that information from RFID microchip 180 and associate it with a transponder commissioning process that may or may not include the programming of additional information into RFID microchip 180. This is a novel method of reading bar coded information on transponder 178 without using a bar code scanner to do so within encoder 30 or 220.

In one embodiment, additional transponder layers include a thin and flexible energy cell comprising two non-toxic, widely-available commodities: zinc and manganese dioxide. One suitable energy cell is developed by Power Paper Ltd. of 21 Yegia Kapayim Street, Kiryat Arye, Petah Tikva, P.O.B. 3353, ISRAEL 49130, and incorporates an innovative process that enables the printing of caseless, thin, flexible and environment-friendly energy cells on a polymer film substrate, by means of a simple mass-printing technology and proprietary inks. The cathode and anode layers are fabricated from proprietary ink-like materials that can be printed onto virtually any substrate, including specialty papers. The cathode and anode are produced as different mixes of

ink, so that the combination of the two creates a 1.5-volt battery that is thin and flexible. Unlike conventional batteries, this type of power source does not require casing.

A top layer of an RFID transponder assembly optionally comprises a paper face-stock 181A, which is a very low-cost material but also is the least environmentally resilient. UV-resistant plastic face-stock 181A generally provides the best survivability in outdoor and rough-service environments, and also provides the best protection for the RFID transponder assembly.

A bottom layer of pressure-sensitive adhesive (PSA) 181D often is used for attachment of transponders to objects and often is referred to as a wet inlay or a wet tag or a wet transponder because of adhesion layer 181B. Alternatively, a layer of clear, translucent, or opaque adhesive-backed film or tape is used to attach the transponder or wireless sensor to object or container. The tape, any thin, low cost, flexible material with a self-adhesive backing, such as a conventional packing tape, is well-suited for this method of attachment. The tape may be formed into various shapes to achieve the requirements of this method. Certain embodiments may use tape that is preprinted with certain logos, marks, symbols, bar codes, colors, and designs. Suitable adhesive-backed tape must not – or at least minimally - absorb radio frequencies within the range of frequencies used by the transponder or tag.

The tape material, also, must not corrode the device or otherwise hamper its functionality.

Certain embodiments use a type of packing manufactured specifically for a given encoder. Packing tape can be single-coated pressure-sensitive adhesive tape or, alternatively, media constructed with multiple layers including a backing layer. Certain backing layers are constructed on a plastic film having one or more layers. Certain backing layers are made from plastic resins such as polypropylene (PP), polyethylene (PE), or copolymers of PP, PE, PVC, polyesters, or vinyl acetates. Certain embodiments of PP are mono-axially oriented polypropylene (MOPP), bi-axially oriented polypropylene (BOPP), or sequentially and bi-axially oriented polypropylene (SBOPP). Certain backing layers are biodegradable. Certain backing layers are coated with a pressure sensitive adhesive on one side and a low adhesion release coating on the other side to reduce the amount of power required for the encoder to unroll the tape for application.

Figure 3 shows a possible embodiment of an RFID transponder 50 that does not include an encapsulation layer comprising a separate tape. In this example, an adhesive layer 52 bonds with antenna layer 54 that is bonded to inlay substrate layer 58 and integrated circuit 56. Inlay substrate layer 58 and face-stock layer 51 provide resistance against electrostatic discharge (ESD) into antenna layer 54 or chip 56.

Other constructions for RFID transponders include one or more additional layers of high-dielectric material that encapsulate or substantially cover the inlay. In general, the thicker the dielectric layer the higher the voltage must be to initiate a flow of electrons through a dielectric layer. This results in higher ESD voltage ratings. Also, it is well known to those skilled in the art that thicker dielectric layers between antenna layer 54 and any other metal or liquid also tends to reduce parasitic loading of the antenna whereby maintaining antenna tuning for proper coupling to interrogators within a specified UHF band. In such embodiments, the integrated circuit chip and antenna bond to an adhesive layer and are protected from a discharge path through the tape layer by its particular thickness of dielectric material. A second dielectric layer bonds to the inlay substrate by a second adhesive layer, so that a low voltage discharge path is nonexistent around the two layers of tape substrate.

In another possible embodiment of an RFID transponder, the inlay substrate provides a second layer of ESD resistance against a discharge path through an outward-facing tape layer and associated adhesive layer. This construction protects the antenna and chip from electrostatic discharge originating from any direction. The encapsulation tape layer bonds to the antenna and chip via an adhesive layer and provides no adhesive bond to the

transport container when the transponder is commissioned, and therefore depends on separate adhesive zones to attach to the container of interest.

In another possible embodiment, an RFID transponder includes multiple layers of ESD resistant material. For example, an outer layer substrate bonds to an inner substrate by an intermediate adhesive layer. A second adhesive layer bonds with the chip and antenna. The inlay substrate faces inward and presses against a transport container when the transponder is commissioned.

The contemplated adhesives in the various RFID transponder embodiments create strong and permanent bonds between tapes and inlay layers over a certain practical range of operating temperatures.

Because RFID transponders are designed to adhere to a container, one face of an external layer includes a pressure-sensitive adhesive. This external adhesive, however, must not cause mechanisms associated with the commissioning devices to jam. To prevent unwanted sticking of the RFID transponder, a transport layer protects the sticky, external adhesive. The transport layer is either a release liner such as a silicone-treated paper liner or a net (or mesh) web . A net or mesh web offers two principal advantages: less weight and being recyclable or reusable. A comparison of the weight of a net with a higher percentage of open area to a typical sheet of release liner reveals that the netting is lighter for any given section of comparable size. Environmental problems of disposal of release liner are well known. Mesh or

netting, comprised of recyclable resins, is recovered after each use so that the mesh or net can be either reused or recycled for its constituent materials.

In one possible embodiment the mesh or netting is made of plastic such as nylon, polypropylene, polyethylene, HDPE, Teflon, or other resins. In other embodiments the mesh or netting is fabricated from metal or carbon-impregnated plastic to provide a conductive path to bleed electric charge away from points of accumulation.

Other advantages of a net or mesh transport layer include a substantial percentage of the adhesive not in contact with anything during storage and commissioning. When stored in a roll, a small percentage of the adhesive layer makes contact with the backside of the roll through the openings in the mesh. Thus, a small amount of energy is required to unroll the spool during transponder commissioning, yet there exists a certain amount of adhesion to prevent a converted spool from unraveling.

In other possible embodiments, the RFID transponders can include a surface suitable for human or machine readable, visible, external markings including bar-code symbols or alpha-numeric sequences.

Figure 4 shows another embodiment of RFID transponders 50 grouped on sheet stock 59 such as rolls or z-folded sheets that enables a plurality of transponders to be carried on a continuous web or traditional release liner.

Other certain embodiments use transponders that are stacked and loaded into magazines for transport, handling, and automated dispensing. In certain embodiments, the magazines contain metallic shielding to protect transponders and inlays from electrostatic discharges (ESD).

In certain embodiments an RFID encoder is combined with a sensor suite 218 as shown in Fig. 10 to enable semi-automated tag application to desired objects. In one embodiment, a semi-automatic encoder/applicator is created by integrating a single sensor device. The sensor responds to changes in light, capacitance, pressure, acoustics, or optical path length to a transport container. In another embodiment a suite of sensors are used to detect the attachment location of a commissionable transponder.

For example, changes in capacitance are detectable using certain QProx charge transfer capacitance sensors available from Quantum Research Group Ltd. of Hamble, England. Ultrasonic range sensors are available from supplier such as muRata Manufacturing Co., Ltd. of Kyoto Japan under the trade name Piezotite. Optical path length sensors are available from Keyence Corporation of Osaka, Japan. Sharp manufactures a compact distance-measuring sensor GP2D02 that is responsive in the range from 5 to 100 cm. Thus, when a predetermined set of conditions is realized, the sensor triggers, enables, or selects a desired action. In one embodiment, proximity or contact of sensor suite with the targeted transport container causes a second type of Trigger

Event, resulting in the commissioning and dispensing of a transponder by an encoder.

In other embodiments, sensor 218 is designed to determine the distance an encoder resides from an object that is to be tagged. Range information is acquired and processed in real time to determine if the encoder is in Close Proximity, Near, or Far from a transport container. In certain embodiments a controller is programmed to alter threshold distances between each range category and to associate a function with each range. In certain embodiments, range category Close Proximity is associated with transponder programming and application functions. For example, the range category Near is reserved for transponder verification and/or reading functions; and Far is reserved for bar code scanning functions to verify that bar code information aligns properly with RFID transponder data.

In other embodiments a sensor suite is responsive to certain colors or patterns and uses that information to instruct the placement or detect the correct locations for applying good transponders and separate locations for discharging bad transponders.

Fig.20 also shows how transponders 178 are rolled onto reels in preparation for encoding. Source roll 185 contains a supply of transponders ready for encoding. Release liner 182 conveys transponders 178 around peel device 183. Unless transponders 178 are mechanically prevented from rotating

around peel device 183, they are conveyed onto take-up roll 184. Take-up reel 184 advances forward while source roll 185 lags behind due to drag created by a clutch, brake, motor or other back-torque generating device. Opposing torques of take-up reel 184 and source reel 185 result in tension in release liner web 182. Shape memory in face stock 181A preferably prevents transponder 178 from remaining adhered to release liner 182 as it passes over peel device 183, resulting in the leading edge lifting off and separating from webbing 182. If take-up reel 184 continues to advance, and transponder 178 does not collide with another object, its attachment to release liner 182 on its trailing edge will result in that transponder being passed completely around peel device 183 onto take-up reel 184. Full path rotation is preferably reserved for transponders that fail to properly encode desired information; and is therefore intended to be a reject process for failed transponders. Preferred embodiments result in tension created in web 182 in a process of tensile extraction of transponders from a source reel and selective transfer of good transponders onto an object or a person's finger. Mobile encoder 30 depends on a person's finger to prevent transponders 178 from rotating around peel device 183. Mobile encoder 220 depends on a target object such as carton face 228 to prevent transponder 223B from rotating around peel plate 222B on a path toward take-up reel 221J.

When the conveyance of RFID transponders results in the positioning of a transponder relative to a near field coupler within a signal null, the transponder

and transport webbing are preferably nudged forward or backward to improve the signal coupling. This is preferably accomplished by momentarily activating the motor and transponder transport means 175C.

MOBILE ENCODER

Figure 17 shows a system 170 according to one embodiment of the present invention including a mobile encoder 175. Fig 5 shows a preferred embodiment for a mobile encoder. Mobile encoder 30 is comprised of housing 32, belt clip 34, antenna 36, on/off switch 33, system ready LED 37, data ready LED 38, and transponder ready LED 39. It is further comprised of auxiliary switch 40, and charger plug 41. A cartridge or other pre-packaged self-contained supply of transponders 42 is preferably latched, snapped, clicked, popped, inserted, slid, or releasably mounted to the body of housing 32. The cartridge preferably includes a take-up reel 44 for non-dispensed RFID transponders, and a port through which blank or securely encodable transponders emerge from source reel 43. The source reel is preferably comprised of a core which may be made from plastic or a recyclable kraft paper fiber to form a wound tube. A tube extends from the walls of cartridge 42 to form an axle around which release liner and transponders are wound and subsequently unwound.

In certain preferred embodiments source reel or roll 43 is constructed using materials such as non-petroleum-based plastics, laminated paper layers, and materials primarily comprised of natural fibers. In another preferred embodiment

the entire pre-packaged self-contained supply of unused transponders is transported to mobile encoder 175, loaded into it, consumed, and disposed of preferably without generating landfill waste.

A key aspect of this invention is a complete pre-packaged, pre-assembled, pre-threaded, self-contained supply of encodable transponders, preferably unlocked with cryptographic access methods. The supply is preferably configured for efficient transportation and shipping, conveyance to a work site, and easy loading into mobile encoder 175, preferably in a single fluid motion.

Fig. 21 is a preferred embodiment of system 170 wherein printed symbols are optically scanned by internal optical reader 226. The embodiment shown in Fig. 21 uses a preferred method of sensing the linear motion of mobile encoder 220 across a target surface by using an optical mouse sensor 225. Such devices are commonly used to track the hand movements of the operator of a computer. Motion in either the X or Y direction is translated into numerical displacement representations which when timed are converted into linear velocities. Tracking and processing the primary axis of motion parallel to the major axis of the release liner, the web speed is preferably controlled by processing means 175B and transponder transport means 175C such that transponder 223A advances at a rate of speed that matches the velocity of the entire mobile encoder across the target surface. Optical mouse 225 tracks displacement across the target surface and also acts as a tamp head to strengthen the adhesive bond of each freshly

applied tag. The process of attachment of the encoded transponder to the target surface is along a vector that is nearly parallel to the target surface at a speed that is based on real time feedback from the surrounding environment as sensed by the optical mouse or other sensor. Optical mouse sensor 225 preferably illuminates its target surface with either a LED (Light Emitting Diode) or a laser. Avago Technologies of San Jose, California manufactures a variety of mouse sensors, both LED-based and laser-based. Laser illumination provides smooth and accurate motion sensing across a variety of surfaces. The model ADNS-6150 small form factor lens working in conjunction with the ADNS-6530 integrated chip-onboard laser sensor and single-mode vertical-cavity surface emitting laser can be used to not only detect motion in the X and Y directions, but also to some degree in the Z direction. Displacement along the Z (depth) vector is reported by the decrease in the number of resolvable features within the field of view as the target surface fades away from the optical focal point. That measurement is reported in the surface quality (SQUAL) register.

Optical mouse sensor 224B is used to measure the linear velocity of transponders as they move along the path of the release liner toward peel device 222B, as well as sense the gaps and edges between transponders 223A and those adjacent to them. The physical outline 178 of transponders 223A are a reliable indication of the location of RFID inlay 181C located within each transponder 223A and enhance system performance with reliable positioning

relative to near field coupler 224A2. The angular velocity of motor 227B and gear train 227A are controlled to achieve a linear transponder velocity that matches the velocity of the mobile encoder itself as it moves across the target surface. Therefore an operator with a fast hand motion is just as successful as a person with a slower hand motion, both will result in a transponder that lays flat, co-planar with the target surface, void of kinks or wrinkles that are characteristic of a poorly controlled transponder application process. In either case, transponder dispensing by transponder transport means 175C will not initiate until optical mouse sensor 225 preferably illuminates the target surface and detects a minimum number of valid features as reported by the SQUAL register internal to the ADNS-6530.

RFID Interrogator 224A encodes RF transponders using either LF (Low Frequency), HF (High Frequency), UHF (Ultra High Frequency), or microwave radio energy. Transponders may be powered by radio energy, light, or stored energy from a source such as a battery. RF coupling is preferably through a near field coupler, an inductive loop or other suitable transducer 224A2 connected to interrogator 224A to focus RF energy on a small area within mobile encoder 175, 30, or 220.

Certain preferred mobile encoder embodiments will not encode RF transponders that fail authenticity tests. In a like manner, RF transponders will preferably not allow themselves to be programmed unless the interrogator can

successfully unlock its secured memory banks. This is a preferred method of protecting transponder cartridge and mobile encoder supply chains from counterfeits and knock-offs. Mobile encoder 175 and the transponders loaded into it will only be successful in exchanging certain data if certain data encryption and challenge response protocols are adhered to. In a preferred embodiment each authorized RFID transponder converter company uses one or more encryption keys to generate passwords that lock the RF tags, whereby preventing them from being programmed unless they are unlocked using the same password. Passwords of this type are specified in the EPC Gen 2 specification and in ISO standards. The passwords are preferably generated by processing means 175B using a public key from publicly readable data such as an asset number or a transponder serial number. A shared private key is then used by an encryption algorithm such as AES in order to create a password or a collection of passwords that can be used to lock or unlock one or several RF tags. Other methods may be used that provide a high degree of certainty that the both the transponders and the mobile encoders are from legitimate sources. Individual failures or patterns of authentication failures are preferably reported to a central database through wireless communications means 175A for subsequent fraud investigation.

Peel device 222B is part of the mobile encoder and preferably rotates or pivots about pivot point 222A into position 222C and a corresponding position (not shown) in Fig 21. Peg 221K helps guide the web to peel device 222B. When

cartridge 221 is inserted into applicator body 227F the web is held in a non-interfering position by guide post 221F and its accompanying cartridge guide post such that peel device 222C can self-thread around the transport web without human effort. This is an improvement over prior art where a peel device is an integral part of the pre-packaged self-contained supply of transponders and requires threading during the cartridge manufacturing process.

Peel device 222B preferably contains a shield on the outer face of the blade, through which radio energy will not pass to encode or interact with a rejected transponder 223B. The dielectric material of the peel device 222B provides sufficient separation from a transponder within the encoding zone and the shield on the back side of the peel device. This is another advantage over a peel device that is part of the cartridge, where the cost sensitivity is much more acute. The shielding on the back side of peel device 222B may be any suitable metal attached or adhered in any reliable or economical manner against the non-conductive dielectric structure of the peel device.

Rejecting transponder 223B requires that mobile encoder transponder peel device 222B have sufficient clearance from target surface 228 as determined by optical mouse sensor 225 using either the SQUAL reading or the shutter readings. Such readings are used to determine if there is sufficient space to advance and rotate a bad transponder 223B around the distal end of peel device 222B.

Figure 1 shows a system 10 according to one embodiment of the present invention including a mobile encoder 30. And, Figure 5 details one possible mobile encoder 30. In this embodiment, the encoder can attach to the belt of an operator, accordingly, mounted on the housing 32 is a belt mounting means such as belt-clip 34, which easily adjusts for left-handed or right-handed operation and corresponding mounting on the belt (not shown) of the operator. An external antenna 36 enhances wireless connectivity to a host or network computer (not shown in this view), or to a remote-mounted computer device such as a PDA or bar code reader. Several operator indicator lights 227E including a system-ready LED 37, data-ready LED 38, and tag-ready LED 39 mounted on the housing enabling the operator an easy view of the device status.

Also included on the exterior of the housing are an external, power-cord receptacle 41 so that the on-board lithium-ion, nickel metal hydride, or other appropriate battery 227D may be charged as required. A combination on/off-next switch 33 enables the operator to selectively power up the encoder. A reset port, such as a recessed reset button (not shown in this view), enables an operator to reset the software settings of the device circuitry on control board 227C as may be required.

A cartridge 42 containing a plurality of RFID transponders releasably mounts to a face of the housing 32. The cartridge further includes a take-up

reel 44 for non-dispensed RFID transponders, a port 46 (above take-up reel 44 but not shown in Fig. 5) for dispensing commissioned transponders, and a supply reel 43 for holding blank RFID transponders prior to commissioning.

In further embodiments, a cartridge 221 containing a plurality of RFID transponders releasably mounts to the body of housing 227F. The cartridge further includes a take-up reel 221J for collecting release liner and non-dispensed RFID transponders, and a port through which blank or securely encodable transponders emerge from source reel 221E. The source reel is comprised of core 221A which may be made from plastic or a recyclable kraft paper fiber to form a wound tube. A tube extends from the walls of cartridge 221 to form axle 221B around which core 221A rotates. Brake shoes 221C create drag, resulting in back torque on the source core, the magnitude of which is controlled by screw 221D which with a knob (not shown) is used to adjust the force applied by brake shoes 221C. The back torque for cartridge 221 is alternatively developed through a motor or an expandable friction coupling into a brake mechanism attached to encoder body 227F.

Take-up core 221H is driven by a tight coupling with drive hub 221G. This tight coupling is achieved through a combination or selection of tight fit, expandable coupling, and sharp teeth. The result is a hub that will easily slide in or out of core 221H with little effort, but still be capable of delivering a substantial amount of drive torque through that connection without slippage.

Drive torque is delivered from gear motor 227B to hub 221G through drive gear 227A the teeth of which engage with each other as cartridge 221 is set into position and locked into place.

In a preferred embodiment, mobile encoder 30 cryptographically unlocks, encodes, and verifies each transponder one by one. In preferred embodiments, transponders are verified more than once. One time immediately after programming with a desired data payload, and then again a second time after encoder 220 automatically dispenses an RFID transponder 223A onto target surface 228. This second verification step insures that the properties of target surface 228 or other nearby materials do not adversely affect the performance of transponder 223A.

In another preferred embodiment, encoder 220 is used to encode and dispense a pattern of several transponders 223A onto a target surface 228 at regular intervals in order to map the surface of a container for example in order to determine an optimal location for a placement of transponders. This information is then preferably used for engineering and planning purposes for high-volume transponder application in a production or distribution facility. Transponders may be designed for operation in any or all of the UHF, HF, LF, or microwave frequency bands.

In one alternative embodiment, the mobile encoder 64 includes a handle (as Figure 9 shows, for example) for hand operation of the encoder. In another

contemplated embodiment, the mobile encoder is fixed to an assembly line in a stationary manner. Accordingly, the stationary-mounted encoder further includes machine-controlled devices for extracting a commissioned RFID transponder from the encoder and places the transponder on the container of interest by means well understood in the art.

In the aforementioned embodiments of the mobile encoder 30 (or hand-held encoder 64 of Figure 8 or Figure 9, for example) key features commonly shared include means for enable Gen2 EPC or ISO standards compliance and multiple printer-emulation modes. On-board power source 60, such as a rechargeable lithium-ion, Nickel Metal Hydride, or other battery enables freedom of movement as does means for wireless connectivity to a data network, such as the 802.11 wireless LAN (Wi-Fi), Bluetooth, or other standards-based communications protocol. However, a conventional power source that requires connectivity to a power-grid and a cable-based data network connectivity link would work under certain circumstances.

Further, in contemplated embodiments, the fixed or mobile encoder enables selective mounting to a magazine or cartridge filled with un-commissioned RFID transponders, which facilitates rapid and easy loading of the encoder with ready-to-use RFID transponders and further enables re-use, re-commissioning, and recycling of un-dispensed transponders and the associated cartridge. The mobile encoder can be monitored and controlled by

virtually any handheld or mobile device, a host computer in a central location, or over the Internet.

Certain features and methods described and explained with relation to handheld applicators are also relevant to non-mobile RFID tag applicators that use a magazine, cartridge, reel, or roll to handle, transport, and dispense RFID tags, inlays, transponders, or wireless sensors. Magazines, cartridges, reels, and rolls are preferably capable of carrying either new or used tags and are preferably capable of being used in either mobile or non-mobile applicators. Magazines, cartridges, and reels are preferably refilled and reused. Magazines and cartridges preferably protect RFID tags from ESD.

Cartridges preferably indicate their empty/full status with a visible indicator such as: an LED, an LCD, a mechanical flag, a window with a view into the source reel, or other such indicators that help an operator choose which cartridge from which to next consume tags.

The mobile encoder 30 is activated (turned on) when an operator selectively depresses the combination on/off-next switch 33. However, depressing the on/off-next switch for about three seconds or longer results in a sleep-mode cycle that can be interrupted by re-pressing the on/off-next switch. In sleep mode the operator indicators (LEDS 37, 38, and 39) will turn off. If active, the mobile encoder system-ready LED 37 illuminates and

connects to the assigned network. Network connectivity results in the illumination of both the system-ready LED 37 and the data-ready LED 38.

Mobile encoders 175 and 30 optionally receive commands and data via the wireless link from the remote computer 154 or optical reader 173. Special bar code commands are scanned by optical reader 173, passed through wireless communication means 175A, and interpreted by processing means 175B mobile encoder 175 to perform certain pre-programmed functions. Commands originating from either computer 154, optical reader 173, or internal bar code scanner 226 (also designated in Fig.1 as internal optical reader 175F) perform functions in categories that include power management, data management, wireless configuration, security, configuration options, and utilization of internal resources.

The encoder receives commands and data via the wireless link from the remote computer 20 or host network computer 11 (of Figure 1). The data represents information to be encoded on an RFID transponder. The information is stored in the encoder's on-board memory and the tag-ready LED 39 or 175K rapidly blinks green (cycles on/off to pulsate). An RFID transponder is moved from within the cartridge 42 to a position on the top edge of the cartridge for encoding in the encoder and the transponder is encoded with the appropriate information. The transponder is tested and if it is good – contains the data and encoding was successful – all three indicator LEDs indicate a solid-green color.

The operator removes the encoded RFID transponder from the encoder and places it on the container of interest.

In the event that the encoding process failed, the bad transponder is detected and retained by the encoder, where it remains on the take up reel 44 inside the cartridge 42. The take up reel also collects the release liner as the encoder 30 dispenses good transponders (properly encoded RFID transponders). The take up reel returns to a re-cycling center where components are re-used or recycled as necessitated. Further, the re-cycling center can perform failure analysis on returned transponders.

Figure 7 is a schematic diagram of additional electro-mechanical components 70 (as generally referred to in Fig. 6) and logic components of a possible encoder 30. An RFID Module 63, such as a MP9311 UHF reader module available from Sirit Technologies, 1321 Valwood Parkway, Suite 620, Carrollton, Texas, 75006, USA, communicates with a vertical polarized YAGI antenna 62 with a downward side lobe to low-power program (commission) RFID transponders to create an RFID transponder, and the same downward side lobe and verify transponders at low power also can read far-field transponders at a higher, second power. Additional components include a mechanical paddle trigger 86 for operator-selected override of the reel of RFID transponder stored in the supply or source reel 43 in the cartridge 42. A drive motor 76 coupled to a dual output shaft gearbox drives the source transponder reel 43

via an intermediate take-up reel gear interface 78 at the cartridge mouth. Another gear assembly along with a spring couple 85 advances and positions the tag feeder paddle 84 with feedback from paddle position sensor 88. A tag sensor 74 detects the location of the RFID transponder to-be commissioned by the YAGI antenna 62. As the reel of RFID transponder advances inside the encoder, the lead edge passes the ratchet post 82. If the now-commissioned transponder is read by the antenna 62 as "good", a ratcheting-back torque spring 83 enables a peel device, such as the shield and tag peel edge 73, to engage, forcing the commissioned tag to peel away from the carrier layer, which continues on to the take up reel 44. In the event of a "bad" tag – that is, the antenna 62 reads the RFID transponder and determines an error has occurred – the shield 73 does not engage, allowing the defective transponder to remain on the carrier layer and proceed to the take-up reel. Once the good transponder is removed from the encoder, the tag sensor 74 detects the condition and enables the encoder to stand-by for the next event. Transponders are read, written, and verified when an operator initiates an action such pulling a trigger 86, pushing a button, or some other command sequence.

Certain protective enclosures, such as cartridges 42 or magazines, are part of a family of interchangeable magazines of similar size, shape, and functionality, which are capable of housing and dispensing certain types,

styles, shapes, and sizes of new or used RFID transponders. Transponder sizes typically range from 4mm-thick foam-backed transponders measuring 12mm wide down to thin transponders that are 15mm wide on 19mm pitch.

In at least one embodiment, the magazine or cartridge 42 includes a unique and embedded, RFID transponder which enables automatic interrogation and tracking of cartridge 42. In certain embodiments, to minimize interference, the cartridge-specific and unique RFID tag or RFID transponder operates in a frequency band that is different than the supply of RFID transponders contained within the protective enclosure. Alternatively, other embodiments selectively interrogate cartridge identification transponders that operate in the same band as transponders within the cartridge that are to be applied.

Certain encoders require replenishment of the battery or other internal, on-board power source 60, such as a fuel cell, or other energy storage technology. Accordingly, in some embodiments, an encoder 30 (or encoder 64 or encoder 210 of Figures 8, 9, and 10) further includes a remote, selectively coupling base unit. The base unit enables a replenishment of magazines or cartridges, provides replaceable power sources, recharges the on-board power source, serves as a communications gateway, and provides a user interface for programming and maintenance of the encoder. For example, spare transponder magazines/cartridges are retained in cartridge pockets where they are protected from damage. Cartridges indicate their empty/full status with a

visible indicator such as: an LED, an LCD, a mechanical flag, a window with a view into the source reel, or other such indicators that help an operator choose which cartridge from which to next consume transponders. The encoder, also, is retained by a protective pocket to prevent damage and to make any required electrical or mechanical connections to the base unit. In some embodiments a base unit mounts to diverse operating locations including various models of fork lift trucks. In such applications, the base unit includes a variety of wired and wireless communications options to enable omni directional communication with the encoder, cartridges, a host computer, vehicle mount terminal, a fork truck computer, or other relevant computing devices. The base unit includes a power system that is suitable for the application, including power filtering and energy storage capabilities such as batteries or fuel cells.

As with all ESD-sensitive equipment, care must be taken to avoid a build-up of damaging electrostatic charges. Accordingly, in certain embodiments charge is removed using a variety of conduction methods including wiping, air, and humidity controls, or use of special materials that contain short conductive elements optionally arranged within a flexible elastic cord.

In some embodiments, the encoder adapts to use a particular type of RFID transponder. One type of suitable RFID transponder is model number AD-

220 from Avery Dennison of Brea, CA or, alternatively, Raflatac model 300846 from Tampere, Finland, or a Spider transponder or FT-33 FAT tag from RSI ID Technologies of Chula Vista, California. Such a transponder is die cut and adhered to release liner. Additionally, wireless sensors are manufactured to specifications that are compatible with the specific encoder, including such specifications as core diameter, outer diameter, and web width. Alternatively, certain steps are required to prepare a standard roll of ALL-9338-02 tags for use in an automated encoder, including unrolling from a large roll (up to about 6-inches in core diameter) onto several smaller rolls having a smaller core diameter (of about 1-inch to about 2-inches in core diameter).

Encoder 30 communicates with a remote computer and includes options to physically, electrically, and communicatively integrate with a portable data terminal (PDT) or a mobile computing platform. Certain PDT's have a variety of wireless connections including PAN and WLAN. Certain PDT's include a bar code scanner comprising a laser, an imager, or other means. In other suitable PDT's an RFID interrogator and antenna are built-in, while certain others have a card slot manufactured to a standard such as PCMCIA, CompactFlash, or Secure Digital, into which interrogator/antenna is plugged into. An example of such a card is the MPR 5000 that plugs into a PCMCIA Type II slot and is available from WJ Communications of San Jose, California. The MPR 5000 is compatible with handheld computers such as the Hewlett Packard iPAQ5550 or other

models that accommodate smaller card-form factors, enabling them to read and write EPCglobal or ISO 18000 compatible UHF RFID transponders.

Other events, information, and status – such as changes in transponder readiness, transponders remaining on the source roll, remaining charge in the battery, changes in range-status between certain predefined states such as Close, Near, and Far – are communicated to the associated PDT. Other possible information, including certain power management functions, commands, status, and data-to-be-encoded into each readied transponder, is provided to the PDT over a wireless connection. Such a configuration puts the encoder in the role of a peripheral device to the PDT 219, with PDT 219 managing the primary user interface and most computation functions.

In some embodiments the encoder adapts to exchange information with a host device, including a PDT, in either a batch-mode or through a real time connection. Batch mode uses a periodically connected data transfer channel such as a wired connection. Certain wired connections include serial data, infrared, optical, Universal Serial Bus, a parallel port, or other physical data connection. Certain real-time connections include wireless data links including Personal Area Network (PAN), Wireless Local Area Network (WLAN), and Wide Area Network (WAN). Certain PAN connections include Bluetooth and Zigbee. Certain suitable WLAN connections include IEEE 802.11a, IEEE 802.11b, and IEEE 802.11g.

For certain encoder embodiments passwords are encoded into transponders or wireless sensors when they are commissioned. Passwords are safeguarded using cloaking, obfuscation, cryptographic techniques, secure and trusted channels, locked memory, and other methods that are commonly used to protect confidential information. Passwords are generated or retrieved from data encoded in an RFID transponder to generate an index into one or more databases that contain a one dimensional array of passwords, a two dimensional array of passwords, a multidimensional array of passwords, or an array of actual or pointers to algorithms used to generate passwords from transponder data, for example. Alternatively, cryptographic algorithms are used to generate passwords from transponder data.

Although this disclosure makes specific reference to a mobile encoder, it is understood that the encoder can easily adapt and be readily configured to a fixed operating environment. For example, it can be mounted to a forklift truck or a high-speed conveyer line and maintain advantages of wireless communication, rapid change-over and other qualities as discussed and developed more fully in this disclosure.

INTERROGATOR APPARATUS

Working as a stand-alone device, or combined with an encoder, certain embodiments of the present invention include an RFID transponder reader, also called an interrogator. The interrogator, in one embodiment, is a physically

separate device that is solely in wireless communication with the encoder. In another embodiment the interrogator includes a wired connection to the encoder. In yet another embodiment, the interrogator connects to the encoder via an intermediate processor, such as a remote computer, or some other intermediate device. In yet another embodiment, the intermediate device is a shared processor in a physically integrated encoder/interrogator apparatus.

Regardless of the physical configuration of the interrogator, its function is to encode and/or verify a RFID transponder's (including wireless sensors) functionality. Certain embodiments use a mobile handheld reader to verify transponder functionality after carton attachment. Certain handheld readers also read bar codes that either partially or completely specify the data that is to be programmed into a transponder. Accordingly, an optical path from the interrogator to a location for reading bar code labels is used to identify certain information about the objects or containers that are to be tagged. Additional transponder encoding instructions and data is acquired through an integral network interface or a batch mode memory in the interrogator.

In certain embodiments, a shield structure incorporated in a combined interrogator/encoder prevents RF fields from interrogating or reprogramming RFID transponders yet-to-be-commissioned that are resident in the combined interrogator/encoder device.

In one embodiment, shown as a cross-sectional schematic in Fig 8, a contact image sensor (CIS) 90 or a linear optical array is used to scan along the length of an RFID transponder before it is applied to a container. CIS 90 produces a video stream that is decoded and then interpreted and stored by an on-board Computer 61. CIS or a similar linear array sensor is capable of reading both linear and two-dimensional bar codes. In certain embodiments, CIS reads two-dimensional bar codes before attachment to inlay or transponder. The on-board computer creates a logical association between bar codes and the commissioned RFID transponder. Encoder 64 reads and associates all bar code symbols on a single segment with the RFID transponder or inlay adhered to it.

In Fig. 10 when an operator pulls the trigger 86, which is either a mechanical trigger or an electro-mechanical device, the on-demand commissioning of the RFID transponder occurs and nearly simultaneously is pressed against a container within a fraction of a second. In certain embodiments, mechanisms internal to encoder 64 transfer mechanical force to the RFID transponder tag through the use of air, springs, motors, plungers, elastomers, or other energy storing or delivering methods. Reloading of the next tag (next transponder) and readying of the system are performed within a time interval that is acceptable to the operator and enables a high degree of productivity for tagging cartons, pallets, or other transport containers.

In certain embodiments of a combined interrogator/application, a trigger 86 couples to an electrical switch having one or more stable positions that are detectable by a controller. In certain modes of operation trigger-switch state is coupled with range information from a sensor suite 218 to execute functions at predetermined ranges at predetermined times. The result is a trigger that functions based upon detected range from a container or other object of interest. This advantageously improves operator efficiency and productivity as one trigger executes several different functions that are typically involved with RFID tagging including the tagging of bar-coded cartons that have been selected to receive wireless sensors.

Verification of bar code occurs either before or after an RFID transponder is commissioned and the tag applied to the container by merely stepping back to a point where the sweep angle of a laser beam or field of view of an imager can read a bar code label. In certain embodiments ranges shorter than that, but not in Close Proximity, are used for sweeping a radio frequency interrogation signal across the faces of multiple cartons to assure that the correct tags, the correct number of transponders, and the correct data within that transponders were all properly programmed.

In certain embodiments Close Proximity range is reserved exclusively for programming, applying, and verifying one transponder, all in a single pull of trigger. In other embodiments, the interrogator includes programmable

conditions that enable Trigger Events to interact with external devices or nearby equipment. For example, at a predetermined range from the interrogator, activation of the trigger causes the encoder to transmit a coded signal to an external device as an indication of an operator action: at a Far-range the signal to requests an external device to read a bar code and the bar code information is decoded and transmitted back to encoder. In another embodiment, decoded barcode information is processed by a portable data terminal (PDT), a vehicle mount terminal, or other computing device.

The on-board computer 61 controls the operation of the RFID Interrogator Module 63 to read, write, and verify RFID tags, inlays, transponders, and wireless sensors that are applied or are within range of the interrogation fields produced by antenna 62. The encoder 30, capable of reading multiple RFID transponders near it, can, in certain embodiments, produce a linearly polarized radio field via the internal antenna 62. In another embodiment, the internal antenna produces a horizontally polarized RF field. A commissioned transponder can be read both before and after it is applied to a transport container. When multiple transponders are within the interrogation field of the encoder 30 with an interrogator module 63 the on-board computer 61 determines which transponders are commissioned and dispensed versus those transponder that have not. In certain embodiments, the on-board computer maintains records of transponders recently applied in order to

properly determine how to interact with each transponder in the field of the internal antenna or other antennae under the control of RFID Interrogator.

In one possible embodiment, the interrogator/encoder utilizes preprinted information on a set of RFID transponders. The pre-printed information includes one or more logos, an EPC-global Seal, and other informative alpha-numeric or bar-code data. Certain preferred embodiments of encoder/applicators 30, 64, and 210 correlate RFID tag data with data encoded in certain preferred bar codes. In certain preferred embodiments, applicators such as applicator 30 read the bar code preferably using a sensor such as CIS 90 as the tape is unrolled from a spool. In certain other preferred embodiments, an RFID tag is located on cartridge 42 and contains a numerical value that is directly or indirectly representative of the numerical values optically encoded into the bar codes preferably at least indicating the starting numerical values of a number sequence. Other additional information is also encoded in the RFID tag in certain preferred embodiments, including the number of tag positions, the number of good tags, the ending sequence number, the date, time and place of tag conversion or other preferred commercial, logistic, or manufacturing information. In certain preferred embodiments of applicators 30, or 210 certain wireless tags attached to cartridge 42 are capable of being read. In certain preferred embodiments the interrogator such as interrogator 63 is capable of reading an RFID tag mounted

to the loaded cartridge, and is also preferably capable of filtering out its response to interrogation or programming of RFID tags.

Certain embodiments have a motorized tape drive and dispensing system. Certain embodiments contain some or all of the following: a rechargeable battery, an operator display, a wireless interface, a network stack, an IP address, a PCMCIA port, a Compact Flash port, a USB cable, a serial cable, a dock port, a window to allow the operator to view the transponder attachment process, or a bar code scanner.

One suitable interrogator includes model MP9311 available from Sirit Technologies of 1321 Valwood Parkway, Suite 620 Carrollton, Texas 75006, USA. Other RFID transponder or wireless sensor interrogator modules with other feature sets are also possible for use in the interrogator/encoder.

Figures 8 and 9 show one possible interrogator/encoder 64 according to the present invention. The interrogator/encoder 64 comprises a housing 65 having a user input device 67, such as a key pad or key board, and a user output device, such as an LCD screen 68, for displaying optically scanned label data, RF interrogated data from a transponder, and other information including on-board diagnostic functions, bios status, and external information provided from a remote computer as sent over a wireless network, for example. A handle structure 66 enables point-of-use deployment while cartridge 42 enables on-demand commissioning of RFID transponders, which are dispensed

from the transponder port 46. In this embodiment, an integrated YAGI antenna 62 creates a large forward-looking main lobe of radio frequency energy for interrogation of commissioned RFID transponders. The internal antenna also produces side lobes of RF energy that although attenuated from the main lobe by several dB, couple enough power into nearby readied transponder to interrogate and write to it.

As further depicted in Figure 10, a reflector 219b passively reflects RF signals from an upper side lobe downward toward readied tag 216f. Backscatter from tag 216f propagates to both antenna 219a and reflector 219b for processing by the interrogator. Having such an antenna embedded in PDT 219 and mounted to the structure of the encoder housing enables the PDT 219 to encode and verify readied transponder 216f while commanding the encoder to commission and dispense a tag when a particular Trigger Event or a predetermined range status change occurs.

An antenna, or alternatively, leaky coax 212a or a near-field coupler is located outside of protective enclosure of cartridge 42 in a location very close to the tag attachment zone in front of a tamp head or tag application roller and holding rollers 216d or hammer 216a.

In some embodiments antenna 212b is a patch antenna with a radiation pattern toward the tag attachment zone. In other embodiments the antenna is a near field coupler. Alternatively, leaky coax, a type of coaxial cable having

slits, slots, or perforations that allow radio frequencies to leak in or out, is used in encoders according to the present invention. A coupled-mode cable, which does not radiate as well as radiating-mode cable, is constructed with closely spaced slots in a corrugated outer conductor. Radiating-mode cable typically has a foil outer conductor with non-uniformly spaced slots arranged in a periodic pattern. Coupled-mode cable is a slow-wave structure. In free space its external fields are closely bound to the cable and do not radiate, except for minor end effects according to "Prediction of Indoor Wireless Coverage by Leaky Coaxial Cable Using Ray Tracing" by Samuel P. Morgan of Bell Laboratories, Lucent Technologies.

In certain embodiments an interrogator drives a signal into a leaky coax that is terminated in a purely resistive load of about 50 ohms. An RF-switch selects between radiating and non-radiating loads including an antenna or leaky coax and, therefore, avoids mismatched load impedance.

In other embodiments internal antenna 212b or 212c is a patch antenna with its strongest lobes oriented toward the tag holding and placement area in the region of holding rollers 216d. Antenna 212c or leaky coax 212a work with an interrogator to produce electromagnetic fields to interrogate, program, and verify wireless sensors. Shield 217e prevents interrogation or programming of RFID transponders until they arrive at separation roller or tag peel edge 217d. A reflector is used in certain embodiments to reflect RF radiation toward a

readied transponder. In the event that verification fails, the operator is informed that the bad tag (or inoperable transponder) is to be discharged onto a surface of a third object other than the encoder or the transport container, for post-mortem analysis.

Referring to Fig. 10 drive motor 76 is preferably located inside the center of source reel 43 within the circular walls of applicator housing 211b, around which cartridge 42 is nested when mated to interrogator/encoder/applicator 210.

Motor 76 is mounted to the structural frame of applicator 210 and preferably transfers mechanical power to certain drive points preferably using gears, belts, or drive shafts within applicator housing 201a or 211a. In certain preferred embodiments of applicator 210 certain preferred drive points include take-up reel 44, source reel 43, or hammer arm 216a.

Trigger 86, preferably embedded within trigger handle 66 is actuated by an operator, preferably causing a Trigger Event. In certain preferred embodiments, there is more than one kind of Trigger Event. In certain preferred embodiments of applicator 210 certain types of either mechanical or electromechanical actuators are preferably used to cause hammer mechanism 216a to trip, being driven toward readied tag 216f, through port 46 for placement on a transport container at the face of bulkhead 211a.

Another means of electromechanical actuation from a Trigger Event initiated by sensor suite 218 is illustrated in Fig. 10 whereby DC motor 215c runs in a reverse direction causing ratchet 216b to become disengaged, allowing hammer 216a to accelerate toward tag 216f due to the torque exerted by spring 216c. Hammer 216a passes between holding rollers 216d to press tag 216f against the face of a transport container.

Interrogator 212d is preferably capable of working with controller 213b to recognize which tags have been recently programmed or applied so as to filter out their response to interrogations of other tags, especially those tags that are being prepared for attachment. Interrogator 212d is preferably capable of modulating its transmitted radio power to affect the range and signal to noise ratio of its coupling to wireless tags.

METHOD OF USING SMARTPHONE FOR ENCODING

Figure 11 shows a method for using a smartphone for encoding RFID tags by using the built-in camera as a barcode scanner. In step 111 a smartphone is positioned to capture the image of a barcode. The barcode can be 1D or 2D, it can carry GTIN or other information. It can already have a serial number such as a serialized Data Matrix barcode for a pharmaceutical item or container. In step 112 the image is decoded and processed by software. In step 113 the payload for a transponder is computed, preferably using serialization algorithms that are presently described. In step 114 a transponder is encoded with the transponder

data payload. The transponder encoding apparatus is either built into the smartphone or attached to it as a peripheral device.

Referring to Fig. 22, smartphone 154 is shown as an Apple iPhone with a peripheral encoding device attached to the accessory port. A peripheral device such as this is one embodiment, in other embodiments the components described herein are contained with the enclosure of smartphone 154. Near field couplers 238a and 238b are used to couple magnetic fields with a nearby transponder for RFID transponder and wireless sensor authentication.. Certain preferred embodiments use one coupler to transmit and the other to receive. Such embodiments therefore require close proximity of both couplers to a transponder in order to read or write transponder data, or to verify transponder authenticity. FIPS 140-2 module 239 has a cryptographic boundary that is preferably compliant with U.S. Government Federal Information Processing Standard 140-2 which is incorporated by reference herein. Module 239 detects temperature variations that are outside of upper and lower temperature limits which is one possible mode of cryptographic attack. It also has tamper detection that detect a physical breach of a mesh or other detection barrier. FIPS140-2 compliant cryptographic module 239 is used to hold cryptographic keys and to perform cryptographic functions. If the module detects an attack, the memory for storing cryptographic keys is immediately cleared. Module 239 preferably

uses non-imprinting memory and therefore leaves no trace of the cryptographic information after being cleared.

METHOD OF TAGGING CONTAINERS

Figure 12 is a block diagram representing a second method according to the present invention including applying RFID transponders to objects of interest. One suitable object of interest comprises transport containers such as corrugated cartons or shrink-wrapped cases on a shipping pallet, which is inadequately addressed by the prior-art, particularly for solutions for manually operated automatic encoding and attachment to a container.

Block 121 represents a process step including the identification and selection of a container to be tagged with an RFID transponder or wireless sensor. In one embodiment this step includes a manual selection and verification processes that consists of manual handling, visual sighting, and scanning bar codes with a hand-held optical reader device. This method contemplates that a transponder encoding scheme is ready in advance and synchronized with a pick list, customer purchase order, advanced shipping notice, and other such records to assure that goods are properly moved and accounted for. Preferred bar code scanners include those that allow an operator to freely handle cartons with two hands. Such scanners include laser bar code scanners or imagers that are worn on

either that back of the operator's hand or near the top knuckle of a finger. Such scanners are described above, and preferably have a Bluetooth or similar wireless interface to connect to mobile encoder 175 or 30. Bar code scanner 226 of Fig. 21 is a preferred embodiment of an alternative device that combines manual bar code scanning and RFID transponder encoding into a single handheld device. The operator may choose to scan bar codes that contain data, application identifiers, commands, or other elements commonly found in automatic data capture applications.

Block 122 represents the process step of processing bar code information to derive the underlying data. Depending on the type of bar code, how it is encoded, and its purpose, different processing steps will be used. In preferred embodiments the bar code may contain SKU information, a GTIN, an SGTIN, EPC data structures, a military UID, an SSSC, an asset number, a file identifier, or other such identifying information. In certain preferred embodiments, the bar code (either one or two dimensional) contains a partial or complete description of the data that is to be encoded into the RF transponder. Such bar codes are described in ISO/IEC draft document PDTR 24729-1. Application identifiers 01 and 21 are combined with additional encoded printed information to fully specify a serialized GTIN (or SGTIN). Using such bar codes does not require the use of additional data in order to generate RF transponder payload data. Mobile encoder 175 may therefore independently receive and process the RF transponder

payload information. One type of bar code is used to signal mobile encoder 175, 30, or 220 that it should enter a mode whereby it performs a serialization algorithm without using an AI 21 bar code. This process step of identifying the information to be encoded may be included in the step represented by Block 121. In this step (Block 122), an operator may use a bar code reader or an encoder/interrogator of this disclosure. Alternatively, the operator may receive instructions delivered to a hand-held PDT or other mobile data terminal connected to a wireless network. This information is delivered to an encoder, such as encoder 30.

Block 123 represents another process step whereby, using a mobile encoder, the operator then commissions an RFID transponder with the information of the previous step (Block 122). Optionally, successful commissioning of the RFID transponder is verified by the encoder. In one embodiment, the encoder tests the next transponder and determines if it is operating within certain predefined specifications including parameters such as activation energy, backscatter signal strength, sensor performance, and other indications of the quality of the transponder. If the encoder determines that the transponder is not likely to result in a successful transponder deployment as may be determined by failure on multiple encoding and verification attempts or due to either physical or electronic deficiencies or abnormalities, then the operator is informed and the failed or bad transponder is discarded

automatically or when an operator pulls a trigger under an operator-acknowledged transponder failure condition.

This step (Block 123) also includes processes to read or determine by dead reckoning the information encoded into certain preprinted optically encoded symbols on the outward facing non-adhesive surface of the adhesive tape. In certain embodiments the adhesive tape is printed with information. In other embodiments the printed information is a machine-readable symbol such as a bar-code symbol. For example, one or more machine-readable symbols are read when the tape is prepared for use in an automated encoder or, alternatively, during the inlay conversion process and conveyed to an encoder through other data storage means, such as an RFID transponder. In one embodiment, an information encoding method uses either one-dimensional or two-dimensional bar codes. In some embodiments a linear imager is used to read either linear or two-dimensional bar codes as the tape is being unrolled from a spool. Some encoding schemes preprint machine-readable symbols at regular intervals along the length of a roll of adhesive tape. In certain embodiments the spacing of the preprinted symbols is at an interval of one half of the nominal length of each section of adhesive tape. In certain embodiments, the encoded information is used as a reference to one or more data storage locations. In other embodiments the data storage locations are accessible through a computer network. In some embodiments, the encoded

information is a series of sequential numbers. Information relating to data stored in the RFID transponder is stored in data storage locations that are referenced by one or more of the preprinted symbols. In an alternative embodiment more than one type of machine-readable symbols can be read from the surface of a segment of tape. In certain embodiments, more than one machine-readable symbol is used as a reference to the same or closely related data records of information stored in the RFID transponder or inlay, and either can be successfully used to access stored data.

In some encoders used in this step (Block 123) a Trigger Event occurs, which results in the verification that a particular commissioned RFID transponder has been tagged and associated with a specific container. This Trigger Event occurs, in certain embodiments, when an operator pulls a trigger on the encoder. In other embodiments the Trigger Event occurs when certain sensors detect preprogrammed conditions relating to the proximity of the encoder face to an object that is to be tagged.

Finally, (Block 124) the operator applies the RFID transponder on the container and, thus, commissions the transponder. In certain embodiments, the location of the targeted placement of the RFID transponder or wireless sensor on the container is stored in a database, which is referenced or pointed to by information that is stored in the memory of the encoder. In one embodiment, the operator holds the encoder against the face of the container based on the

tagging requirements for that particular container. The tagging requirements including the location and orientation of the RFID transponder to be placed is conveyed visually or aurally. For example, the operator receives visual information via a screen or display on the encoder. In certain embodiments, physical indicators are attached to the encoder and extend from its body in a direction and manner so as to assist the operator in the positioning of the transponder onto the carton. In other embodiments, transponders are applied to the interior of a carton, before it is sealed.

METHOD OF COMMISSIONING RFID TRANSPONDERS USING A MOBILE APPLICATOR.

Figure 13 is a block diagram showing a method according to the present invention for commissioning RFID transponders using an encoder, such as the encoder 30, couples to a cartridge or protective enclosure containing a plurality of RFID transporters releaseably mounted on a transport sheet or roll. The encoder enables the roll of RFID transponders to advance one position (Block 131), placing the Next Tag in a test 1 position. The Next Tag is tested (Block 133) to ensure that it performs within predetermined parameters such as activation energy, backscatter signal strength, sensor performance, and other indications of the quality of the transponder. One possible method includes encoding a transponder using only a minimal amount of radio-frequency energy. Since transponder encoding requires more energy than

reading a transponder, this low power test constitutes a basic test of both minimal activation energy and backscatter signal strength.

An RFID transponder that fails this test (Block 133) results in a "Bad Tag" status and proceeds to the take-up reel of the encoder (Block 135). Thus, any failed transponder remains captive in the cartridge and cannot be released from the encoder by an operator. Optionally, the operator is notified of the failed transponder so the operator can request a newly encoded transponder (Block 137). However, in one embodiment, the notification step occurs automatically, and a newly encoded next transponder is generated without input from the operator.

Block 132 shows that a "good" transponder is positioned in the encoder for the encoding process. The RFID transponder that passes the test 1 position is commissioned with predetermined data based on the container to be tagged. Methods of obtaining, storing, encoding, and commissioning this information on the RFID transponder are discussed elsewhere in this disclosure.

The commissioned transponder undergoes a verification process (Block 134) to determine if the intended information was successfully encoded on the RFID transponder. Certain embodiments combine the verification step with the encoding step to gain operational efficiencies. If this verification test results in a fail condition, the transponder remains in the encoder and ultimately winds

on the take-up reel in the cartridge for subsequent post-mortem failure analysis.

Block 136 represents a pass condition. The encoder removes the commissioned RFID transponder from the transport web or release liner, enabling the operator to retrieve the transponder from the encoder and in Block 138 apply the transponder to the container. In an alternative embodiment for Block 138, the operator or a fixture holds the encoder against a surface of the container and the encoder places the commissioned RFID transponder directly on the container without operator intervention.

Figure 14 is a system diagram that illustrates a preferred serial number allocation system according to the present invention. Blocks of serial numbers are allocated to RFID printers and encoding devices such as RFID encoder 155 of Figure 15 as described in more detail below. Each object class, represented in Fig. 14 as GTIN's, has its own separate serial numbering space. As described above, the entire object class serial number space is subdivided into sectors that are defined by a limited number of most significant bits of the serial number field. In the case of a GS1 SGTIN-96 key type, the serial number field is 38 bits long.

To show how this is accomplished in Serial Number Database 140, a representative object class is managed by Table GTIN A 141 and is shown to have three serial number block sizes of lengths 10, 11, and 12 bits. Within

table 141 are three rows, or tuples 141a-c. Each row or tuple contains two columns or attributes: a starting serial number and the amount of remaining space until the next serial number block. In preferred embodiments, the remaining space is expressed in units of blocks of the selected block size.

Now by way of a more detailed example, allocation of blocks of serial numbers of different sizes is shown as requests are encountered over a period of time. An initial request is made for serial number Block 0 144 for GTIN A that is 10-bits long. At that time then all of the rows of table 141 show the same starting number of 000000. When the initial request for a 10-bit block is granted for block 144, the starting number for the next block of that size is increased to the end of the first 10-bit block and the remaining blocks is computed based on the following algorithm: the starting point for the 11-bit block 141b is adjusted to the next greatest unused number that contains all zeros in the bits that represent the next assignable block of that size. The same is done for 12-bit block 141c and so forth unless those blocks have already been assigned to an RFID encoder 155 using for example Block 1 145 , in which case they are not changed. The remaining counts values for each block will remain at zero for each block that is not bounded on the upper side by an assigned block of another size. If a serial number block is bounded, then the remaining count value is adjusted to accurately describe the number of serial number blocks that can be assigned. If additional blocks of that size are

subsequently required, then, space permitting, a new block starting number is assigned and the process continues until the entire serial numbering space is fully allocated.

In preferred embodiments, a request is made by smartphone 154 as shown in Fig. 15. The smartphone preferably performs biometric authentication as shown in step 161 of Fig. 16. In step 162, using smartphone 154 devices such as camera 237 of Fig. 22 a biometric match for a face, iris, voice, or fingerprints breaks the retry loop with an authorization to continue to step 163. In step 163 transponder encoding is enabled and smartphone 154 is authorized to request, as a lower database level, blocks of serial numbers for specific object classes, such as certain GTIN's. RFID printers and encoders 155 are preferably then readied for encoding. Biometric security enables brand owners to enforce security procedures within their own plants and at contract manufacturing locations all over the world.

Table GTIN B 142 and Table GTIN C 143 show that each GTIN is managed separately to provide unique serial number blocks such as Block 2 146, possibly according to different rules. In fact since GTIN's are typically purchased and owned by brand owners, and database 140 may be used to manage serial number allocation for multiple brand owners, then the rules that are applied to the various GTIN object classes in Fig. 14 may be different. Retail brand owners may want linear serial number assignments within each

block while a pharmaceutical brand owner may want to have randomly assigned serial numbers within each serial number block. In a preferred embodiment allocated block 141c is issued to a lower database level or directly to an encoder's internal memory for commissioning transponders with randomly assigned serial numbers from within the range of numbers that are defined by that allocate block 141c.

Brand owner A with GTIN A may also have serial number blocks managed with a finer granularity than brand owner C with GTIN C. Furthermore a possible reason for brand owner C to select very large block sizes as shown in Table GTIN C 143 is to allow serial number allocation to be managed according to a different method such as chip-based serialization from chip manufacturers Impinj, Alien, or NXP for example.

Figure 15, a block diagram, shows the essential parts of a system to manage unique serial numbers on a global scale using smartphones as mobile remote computers. Server 151 is a computer running a server application such as an Apache HTTP web server on an operating system such as Unix, FreeBSD, Linux, Solaris, Novell NetWare, Mac OS X, Microsoft Windows, OS/2, or TPF. Web server 151 can be owned, borrowed, or rented by the slice from cloud service providers.

SQL database 152 preferably conforms to ISO/IEC 9075 and its various parts. In other embodiments, a database other than SQL is used to perform the

data storage and retrieval functions described herein. SQL queries are preferably performed with the declarative SELECT statement which retrieves data from one or more tables, or expressions.

Script 153 preferably executes on server 151 and is written in a general-purpose server-side scripting language such as PHP to produce dynamic web pages.

A segment of PHP code that is used to store RFID tag commissioning data is:

```
$stmt = $this->db->prepare("INSERT INTO SGTINs
(CommissioningReport_EncStatus_SessionNum, SGTIN, GTIN) VALUES (?, ?, ?,
?)");
$stmt->bind_param("ssii", $attrSession, $sgtinN, $attrGtin);
$stmt->execute();
$stmt->close();
```

Smartphone 154 preferably uses asynchronous data transfer techniques in a multi-threaded computing environment to communicate with script 153 in server 151 to prevent thread-blocking that gives the appearance of the program seizing up while waiting for a database transaction to be completed. Certain preferred embodiments use ASIHTTPRequest on Apple iOS smartphones to request a transaction with a remote database without blocking

a major program thread. Below is an example of an iOS function to store an XML commissioning report from RFID encoder 155:

```
-(void)SQLStoreRecentTaggingForString:(NSString *)recentTagging
{
    NSURL *url = [NSURL
URLWithString:@"http://www.adasainc.com/update.php"];
    ASIFormDataRequest *request = [ASIFormDataRequest
requestWithURL:url];
    NSString *comTagStrTrimPhp =[recentTagging
stringByReplacingOccurrencesOfString:@" " withString:@""];
    NSLog(@"SQLStoreRecentTaggingForString: '%@'",
comTagStrTrimPhp);
    [request setPostValue:comTagStrTrimPhp forKey:@"comTags"];
    [request setDelegate:self];
    [request startAsynchronous];
}
```

The method startAsynchronous is used on the request to start a database transfer on a separate computing thread. This is one important aspect of asynchronous data transfer in periodically connected system nodes. Another example is in the collection of XML report data from RFID encoder

155, piece by piece to assemble a complete string. The iOS code line [scanner.readRecentString appendString:trimStr]; illustrates how trimStr is appended onto a string, in this case named readRecentString that is an NSMutableString that is allocated as part of an instance that coordinates communications with a particular RFID encoder. Once the end tag is received, then iOS program assembles a request to store tag commissioning data. The iOS program is also ready to receive authorizations from server 151 as responses are returned from it. The authorizations are preferably able to be stored and retrieved when the same RFID encoder 155 reconnects with smartphone 154. This system design therefore illustrates a preferred method for collecting commissioning data, storing it in an SQL database, and delivering new encoding authorizations to RFID encoders like RFID encoder 155 without requiring any realtime connections to a remote database.

RFID Transponder 156 receives and stores a globally unique identifier such as an SGTIN-96 through an intermittently connected chain of computers and programs as described above and as illustrated in Fig. 15.

In Fig. 23, Block 240 is used to scan a barcode, such as a GTIN. In Block 241 the RFID transponder payload is computed, preferably using serialization algorithms and methods that are disclosed herein.

Block 242 represents the process step whereby mobile encoder 175, 30, or 220 encodes an RFID transponder with the information of the previous step (Block 241).

Successful commissioning of the RFID transponder is preferably verified by the encoder as shown in Block 243. In one embodiment, the encoder tests the immediate transponder and determines if it is operating within certain predefined specifications including parameters such as activation energy, backscatter signal strength, sensor performance, and other indications of the quality of the transponder.

If in Block 244 the encoder determines that the transponder is not likely to result in a successful transponder deployment as may be determined by failure on multiple encoding and verification attempts or due to other evidence of physical or electronic deficiencies or abnormalities, then the operator is optionally informed and the failed or bad transponder is discarded automatically as shown in Block 245.

Block 246 is the process of using motor 227B and/or transponder transport means 175C to pull release liner 182 tighter and tighter such that webbing 182 advances forward to the point that the leading edge of transponder 178 extends past the distal end of peel device 183 or 222B.

In Block 247 web 182 is pulled forward to the point that transponder 178 or 223A begins to rotate around peel device 183 or 222B. It is in this step that either a human finger or some target object needs to be presented in the rotational path of the tipping transponder 178 or 223A must be located. In the case of mobile encoder 30 where the operator is required to handle the encoded tag, it is important that their finger be present as transponder 178 begins to tip, allowing adhesive layer 181D of transponder 178 to make contact and be removed for placement on a target object such as a shipping container, trackable asset, automobile windshield, or other object of interest. In cases where the operator scans a bar code and applies encoded transponder 178 in a single motion, mobile encoder 220 is preferred, wherein as transponder 178 tips as it rotates around peel device 222B adhesive layer 181D sticks directly onto target surface 228. In either case, encoded transponder 178 is caught mid-rotation and adhesive layer 181D provides adhesive forces sufficient to completely detach transponder 178 from release liner 182, thus completing the function of Block 247 where work flow returns to Block 240 for another transponder encoding cycle to begin.

While the invention has been particularly shown and described with reference to certain embodiments, it will be understood by those skilled in the art that various changes in form and detail may be made without departing from the spirit and scope of the invention.

CLAIMS

I claim:

1. A system that provides unique object numbers for on-demand commissioning of RFID transponders using an RFID encoder having an internal memory to intermittently receive allocations of blocks of subdivided object class serial number space from an external numbering authority, the system comprised of:

the external numbering authority allocating blocks from the allocations of blocks of subdivided object class serial number space, from a larger object class serial number space, to lower database levels and to the encoder's internal memory for encoding unique object numbers into the RFID transponders as objects of an object class are presented to the encoder for RFID transponder encoding;

the allocations of blocks of subdivided object class serial number space being allocated by subdividing the larger object class serial number space into sectors that are defined by a limited number of most significant bits of the object class serial numbers; and

assigning to the RFID encoder the allocated blocks with reference to the starting number of each of the allocated blocks and the size of each of the

allocated blocks that the RFID encoder is authorized to encode within an object class.

2. The system of claim 1 wherein the lower database level is a computer.

3. The system of claim 2 wherein the computer is a smartphone.

4. The system of claim 3 wherein the smartphone uniquely identifies the RFID encoders by their Mac addresses.

5. The system of claim 1 wherein the allocated blocks of subdivided object class serial number space are of various sizes.

6. The system of claim 1 further comprising blocks that provide a range of serial numbers that are sequentially assigned to the RFID transponders.

7. The system of claim 1 further comprising blocks that provide a range of serial numbers that are randomly assigned to the RFID transponders.

8. The system of claim 1 wherein the encoding of unique object numbers uses a near field coupler.

9. A plurality of commissioned RFID transponders each comprising a unique object number from an allocated block of subdivided object class serial number space;

the allocated block having been allocated from an upper level database;

the allocated block having a reference to a block starting serial number and a block size number within a larger object class serial number space;

the allocated block being one of a plurality of allocations intermittently issued to lower database levels and to encoders having internal memory for storage of allocated blocks from an external encoding authority;

the external encoding authority comprised of subdivisions of the larger object class serial number space into sectors that are defined by a limited number of most significant bits of the object class serial numbers; and

the unique object number encoded into one of the plurality of RFID transponders as an object of the object class is presented to the encoder.

10. The plurality of transponders of claim 9, each transponder further comprising a single unique object number.

11. The plurality of transponders of claim 9, each transponder further comprising a unique object number that is part of a serialized global trade item number.

12. The plurality of transponders of claim 9, each transponder further comprising a unique object number that is part of a sequential series of numbers.

13. The plurality of transponders of claim 9, each transponder further comprising a unique object number that is part of a block of randomly assigned numbers.

14. An object number encoded into an RFID transponder of the plurality of transponders according to claim 9 wherein the object number is encoded using a near field coupler.

15. A method that provides unique object numbers for on-demand commissioning of RFID transponders using an RFID encoder having an internal memory to intermittently receive allocations of blocks of subdivided object class serial number space from an external numbering authority, the method comprised of:

the external numbering authority allocating blocks from the allocations of blocks of subdivided object class serial number space, from a larger object class serial number space, to lower database levels and to the encoder's internal memory for encoding unique object numbers into the RFID transponders as objects of an object class are presented to the encoder for RFID transponder encoding;

the allocations of blocks of subdivided object class serial number space being allocated by subdividing the larger object class serial number space into

sectors that are defined by a limited number of most significant bits of the object class serial numbers; and

assigning to the RFID encoder the allocated blocks with reference to the starting number of each of the allocated blocks and the size of each of the allocated blocks that the RFID encoder is authorized to encode within an object class.

16. The method of claim 15 further comprising the step of a biometric authentication of a person to establish the authority of a smartphone as an authorized lower database level.

- - -

ABSTRACT

In one embodiment the present invention comprises a smartphone and encoders for commissioning RFID transponders. The present invention further includes novel systems, devices, and methods for commissioning RFID transponders with unique object class instance numbers without requiring a realtime connection to a serialization database.

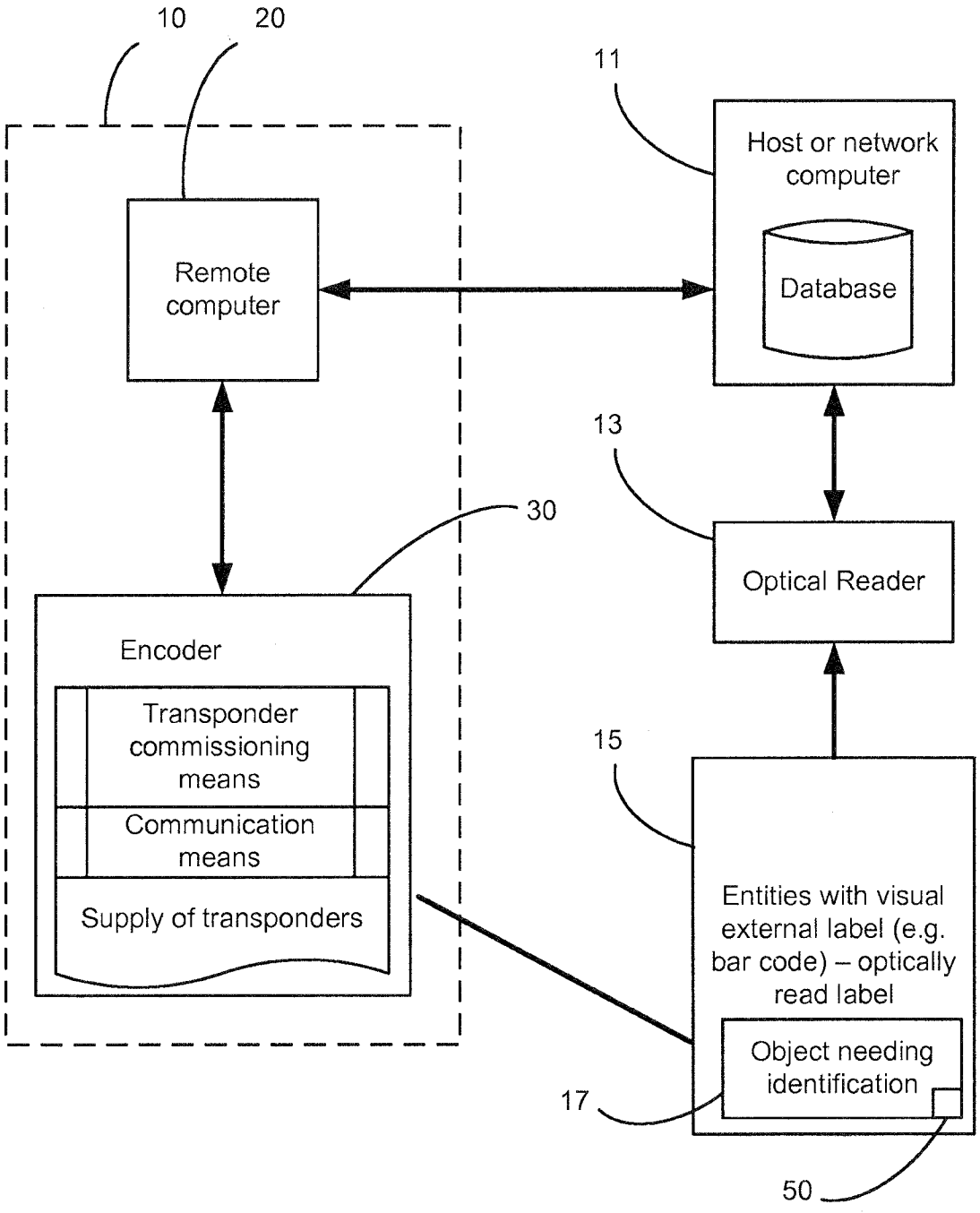

10
20
11
Host or network computer
Database
Remote computer
13
30
Optical Reader
Encoder
Transponder commissioning means
Communication means
Supply of transponders
15
Entities with visual external label (e.g. bar code) – optically read label
Object needing identification
17
50

FIG. 1

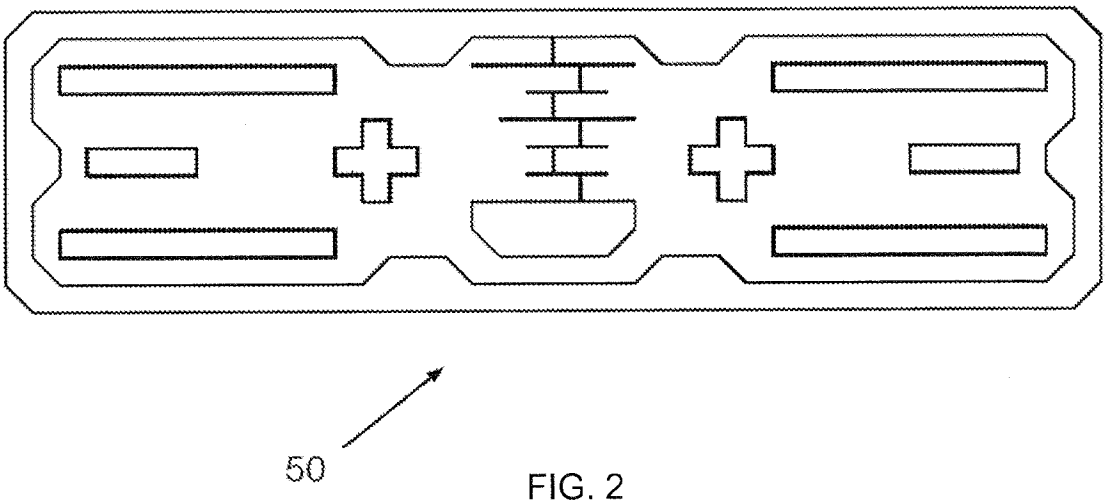


FIG. 2

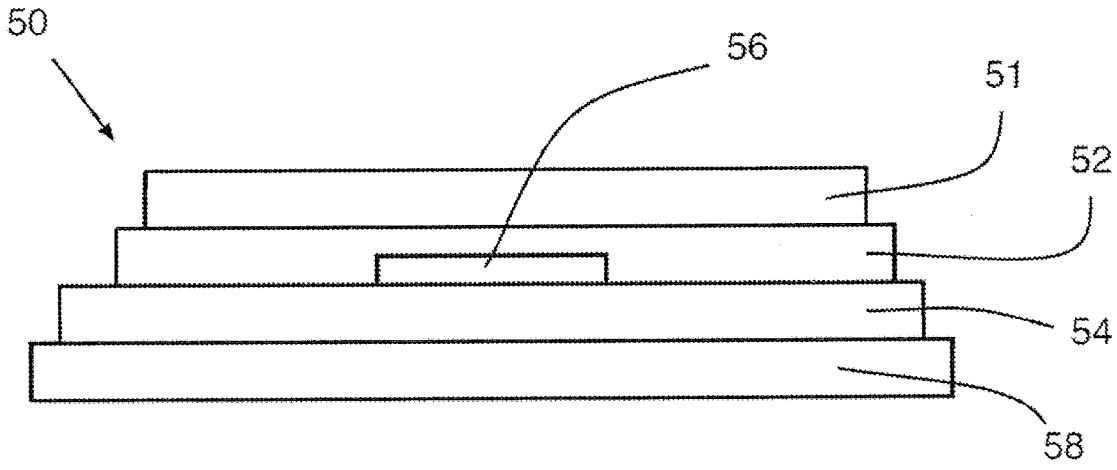


FIG. 3

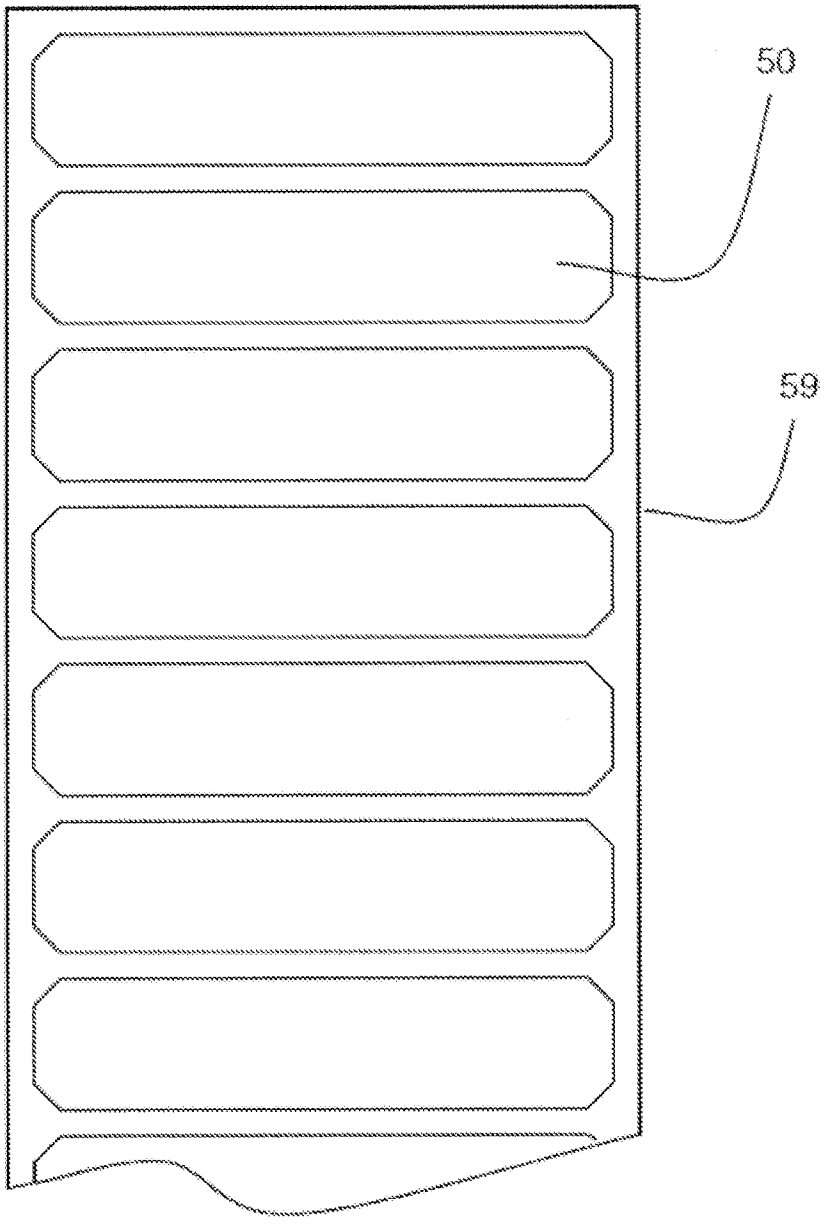


FIG. 4

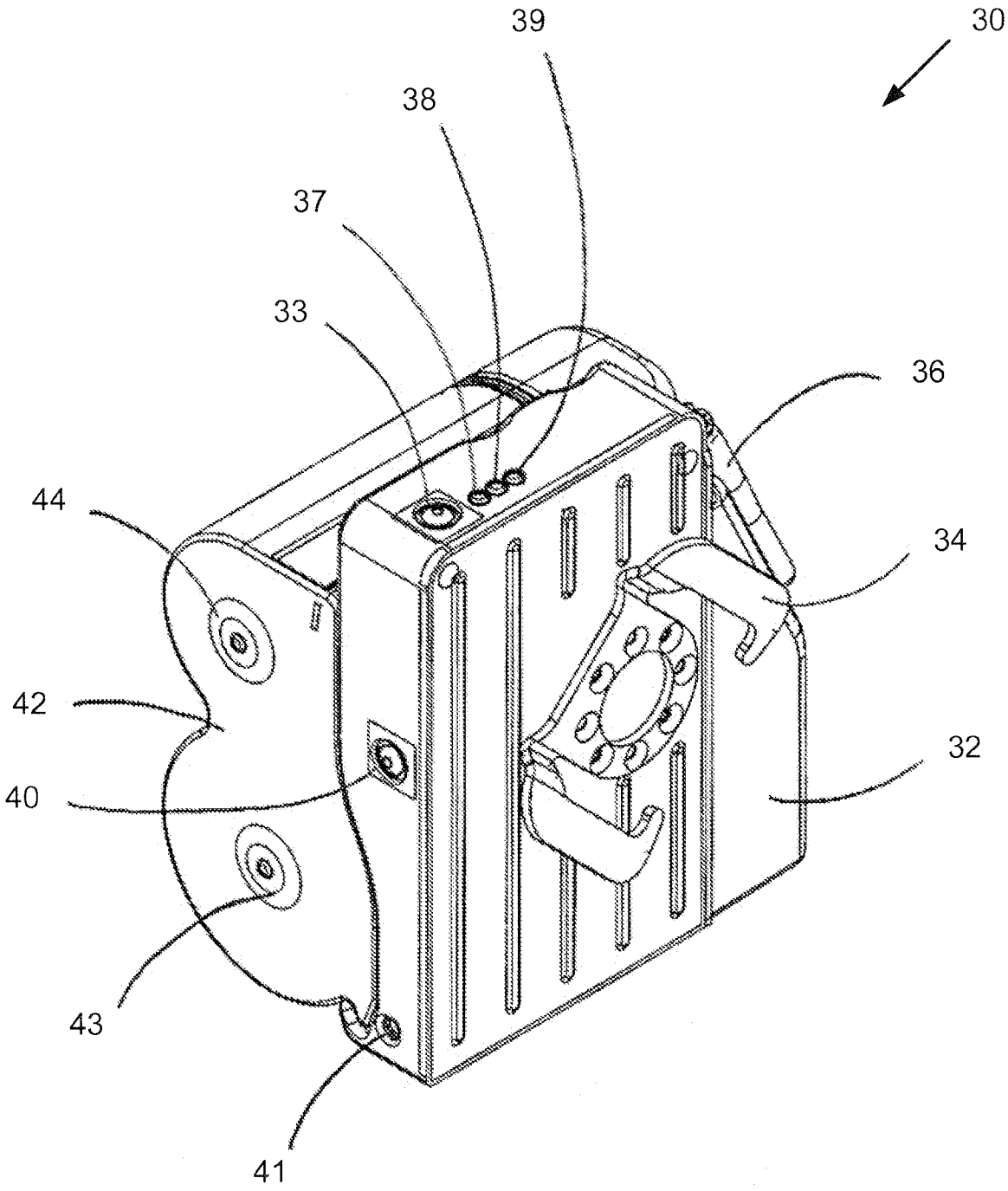


FIG 5

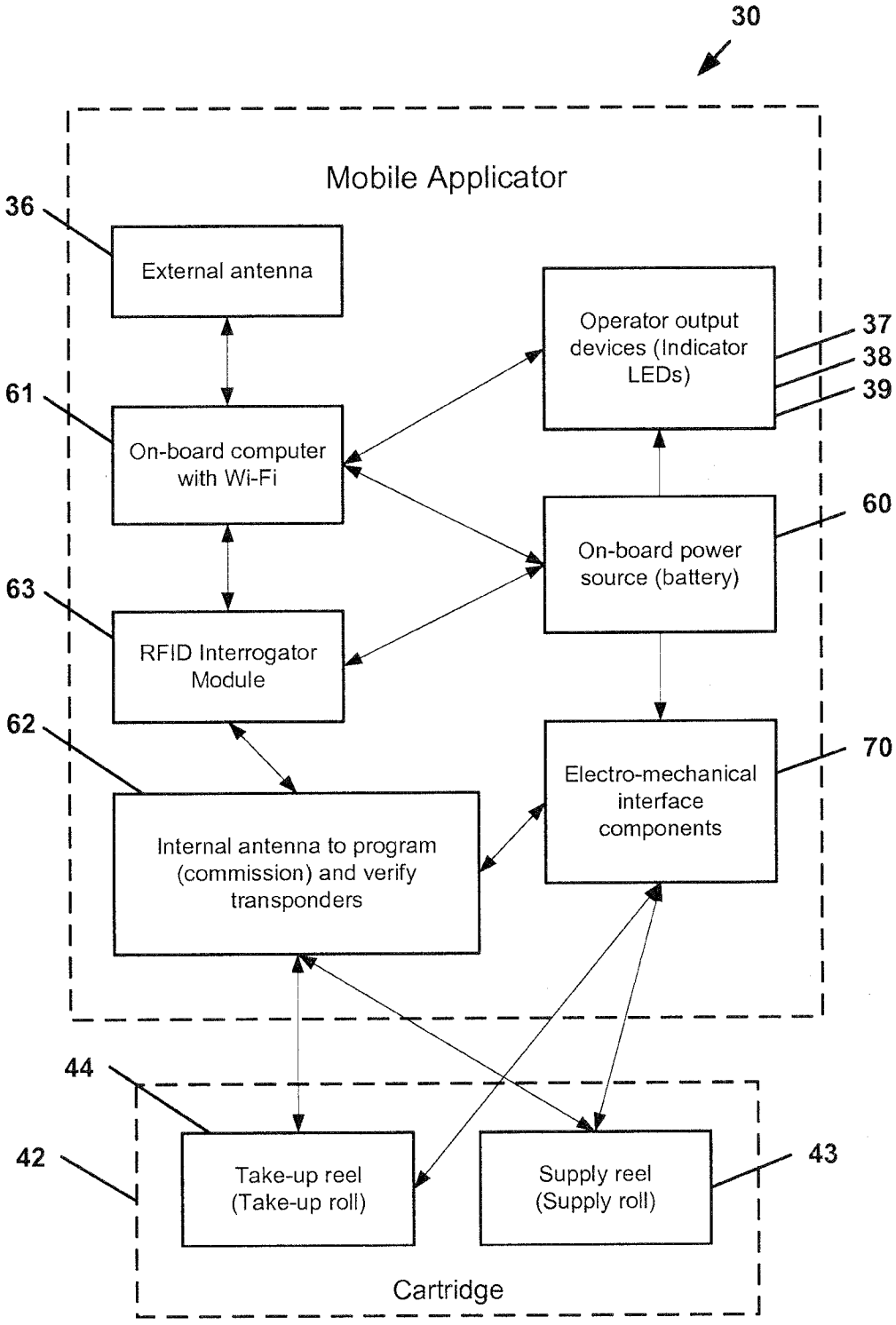

30
Mobile Applicator
36
External antenna
61
On-board computer with Wi-Fi
63
RFID Interrogator Module
62
Internal antenna to program (commission) and verify transponders
Operator output devices (Indicator LEDs)
37
38
39
On-board power source (battery)
60
Electro-mechanical interface components
70
44
42
Take-up reel (Take-up roll)
Supply reel (Supply roll)
43
Cartridge

FIG. 6

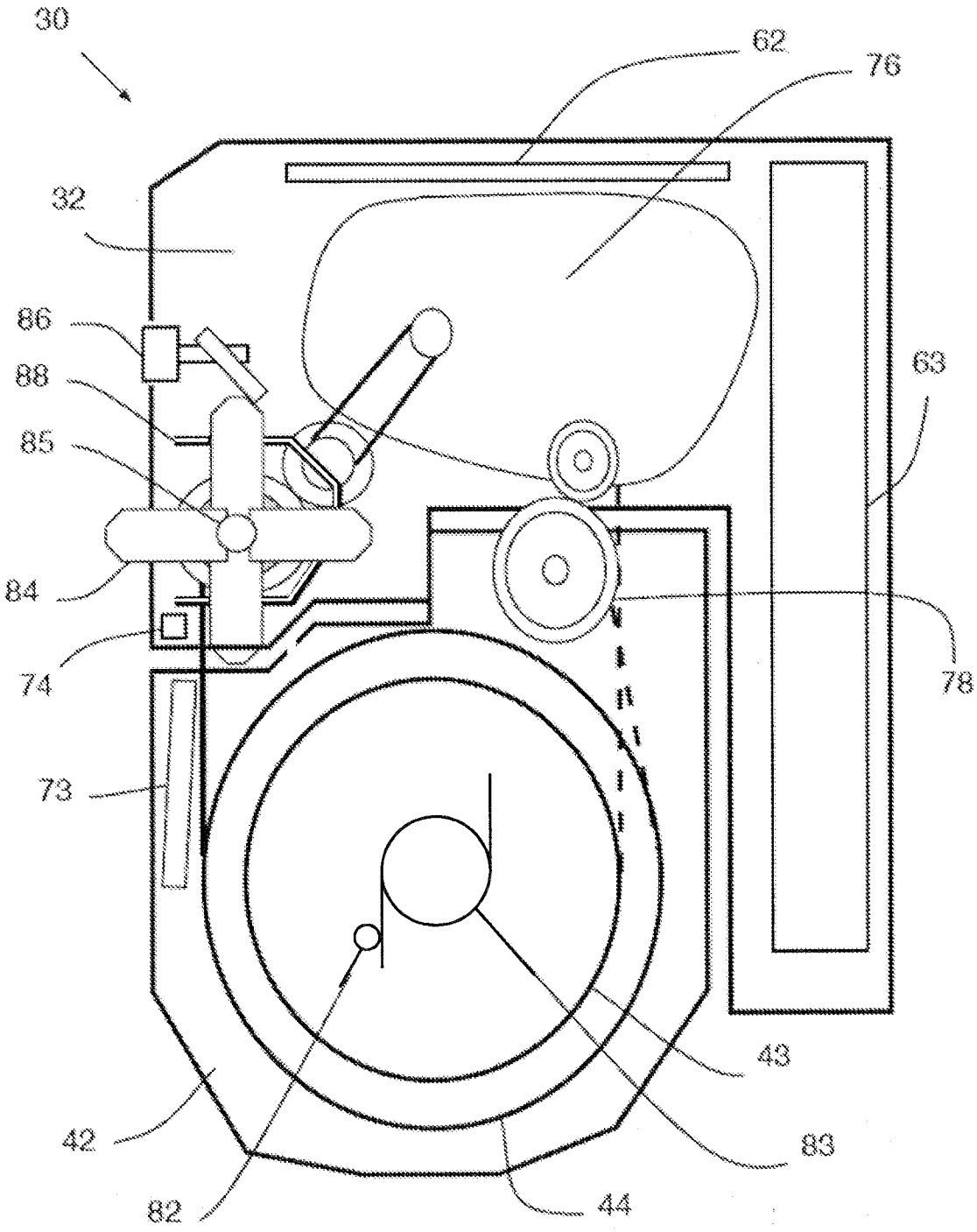


FIG. 7

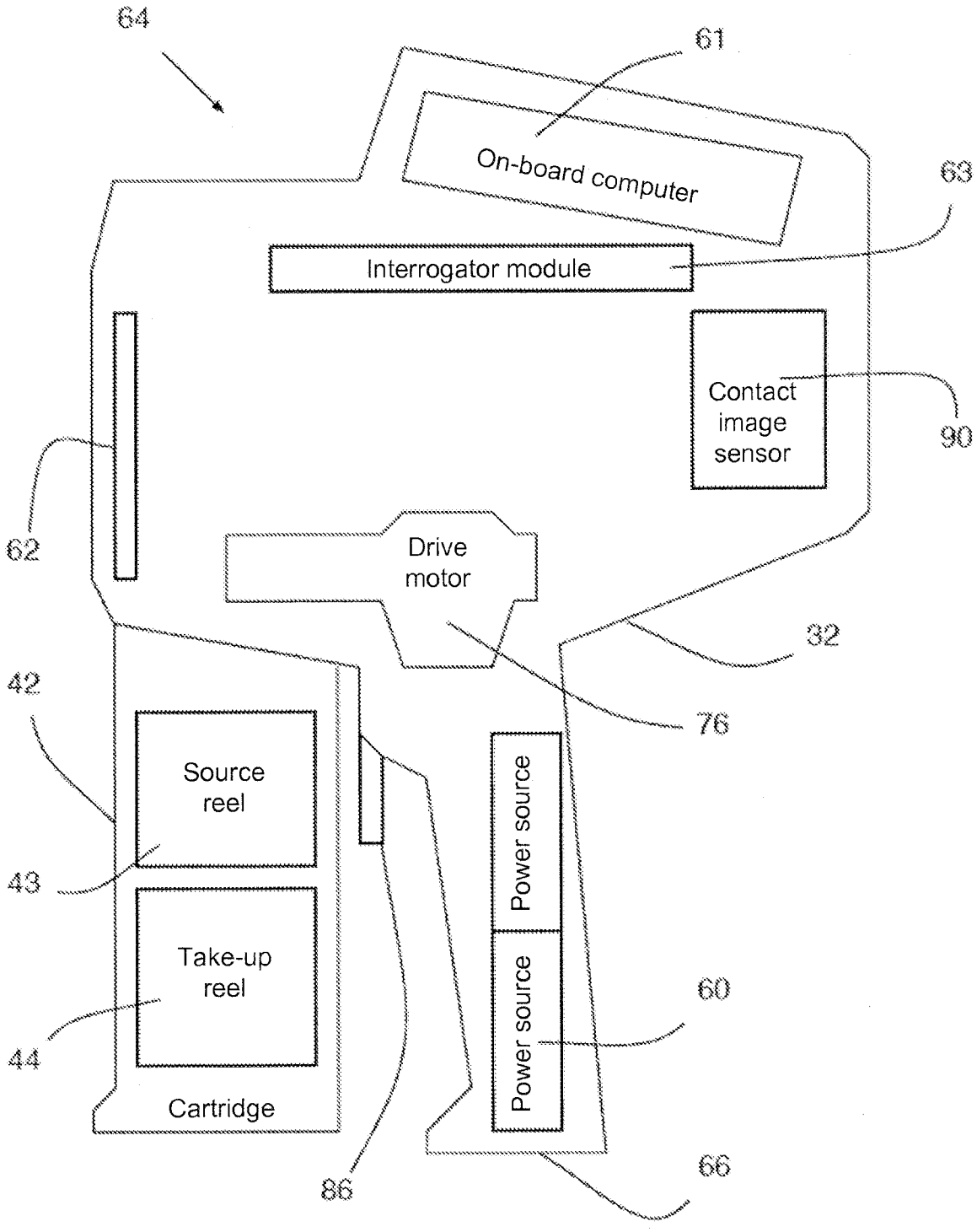

64
61
On-board computer
63
Interrogator module
Contact image sensor
90
62
Drive motor
32
42
76
Source reel
43
Power source
Take-up reel
Power source
60
44
Cartridge
66
86

FIG. 8

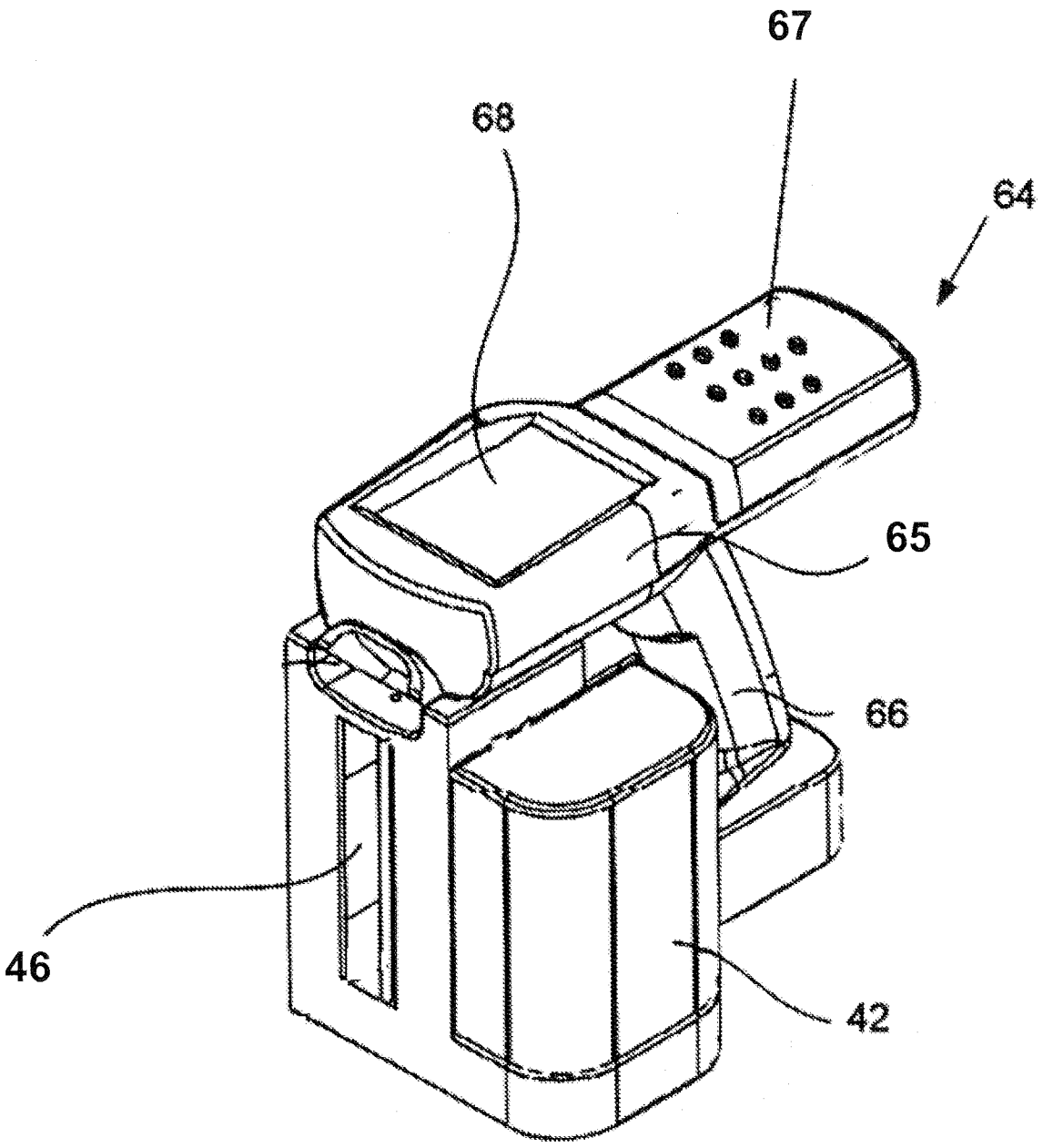


Fig. 9

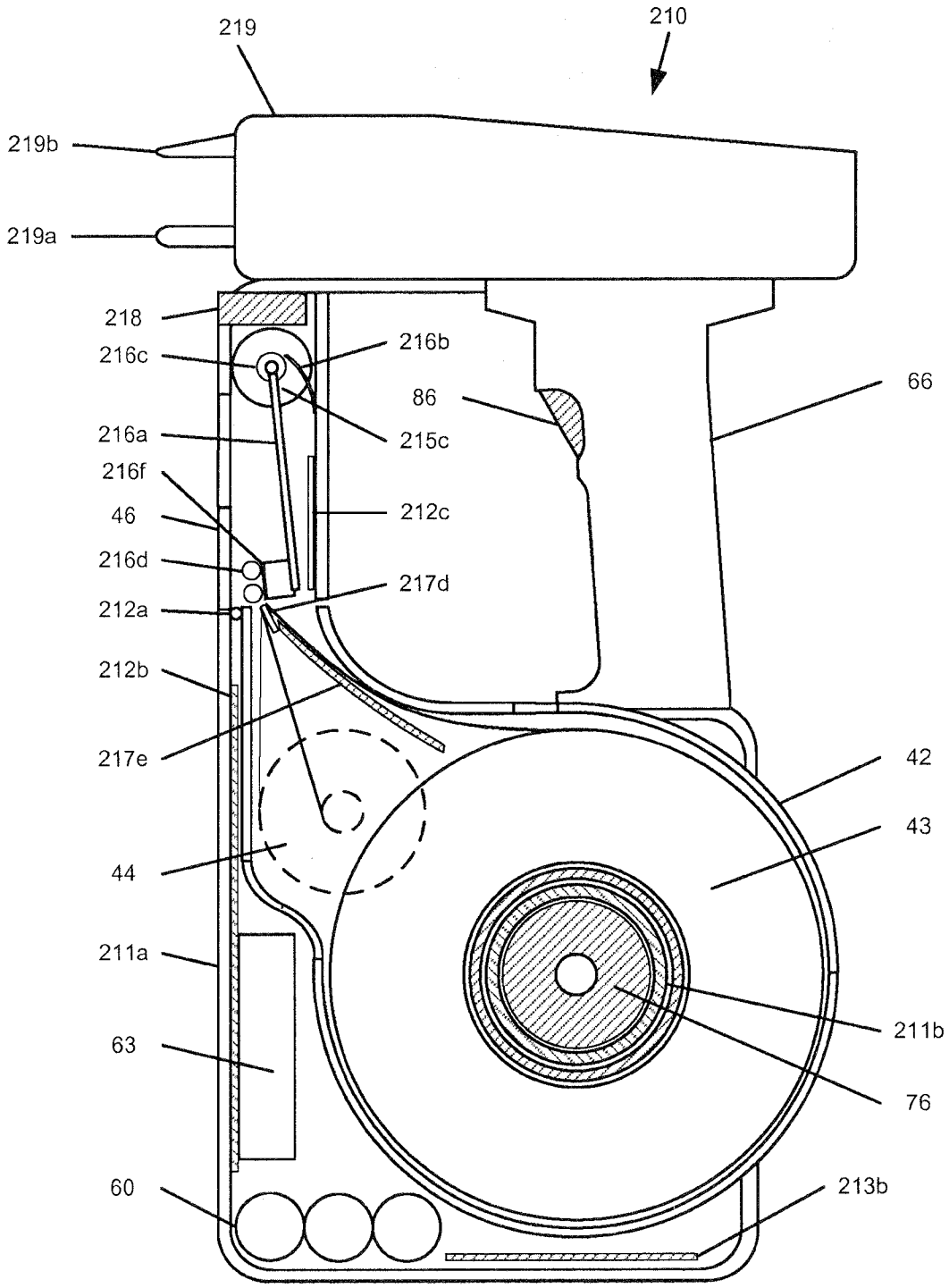

219
210
219b
219a
218
216c
216b
86
66
215c
216a
216f
46
212c
216d
217d
212a
212b
217e
42
43
44
211a
211b
63
76
60
213b

FIG. 10

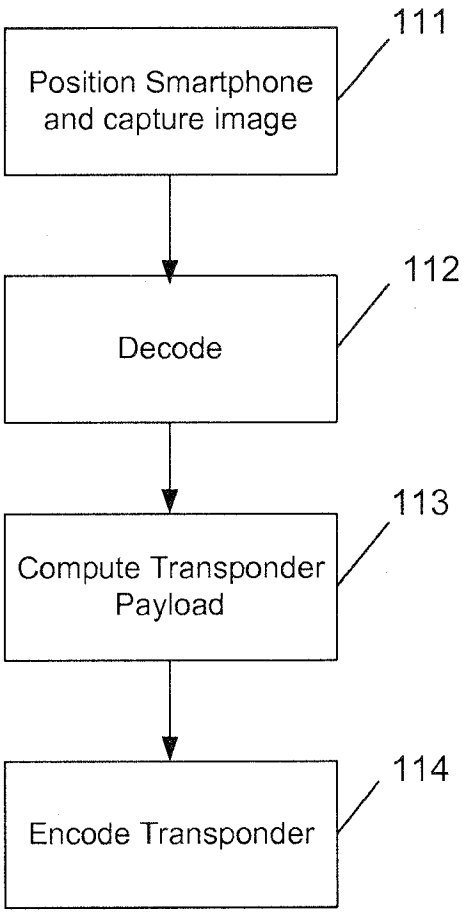

111
Position Smartphone and capture image
112
Decode
113
Compute Transponder Payload
114
Encode Transponder

Fig. 11

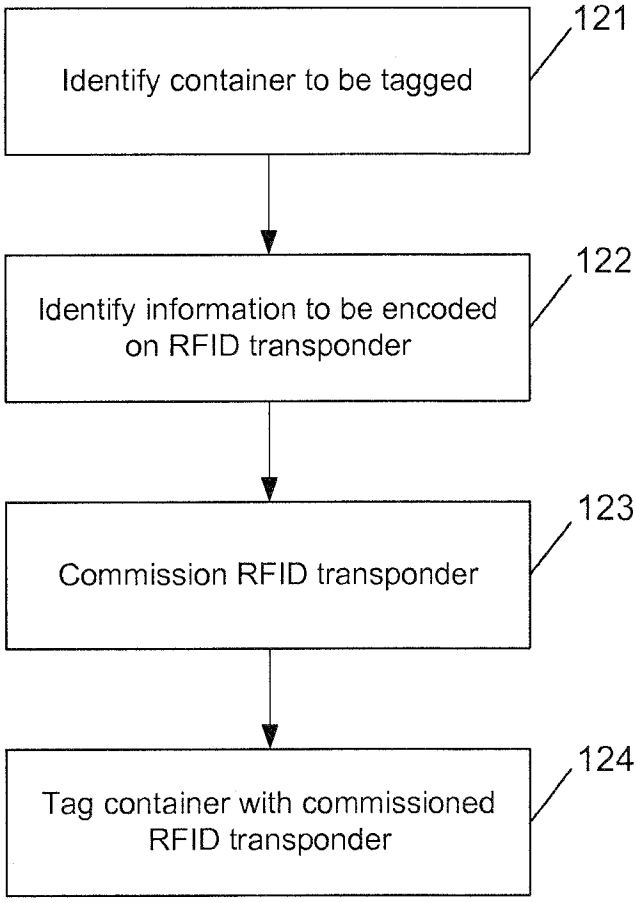

121
Identify container to be tagged
122
Identify information to be encoded on RFID transponder
123
Commission RFID transponder
124
Tag container with commissioned RFID transponder

Fig. 12

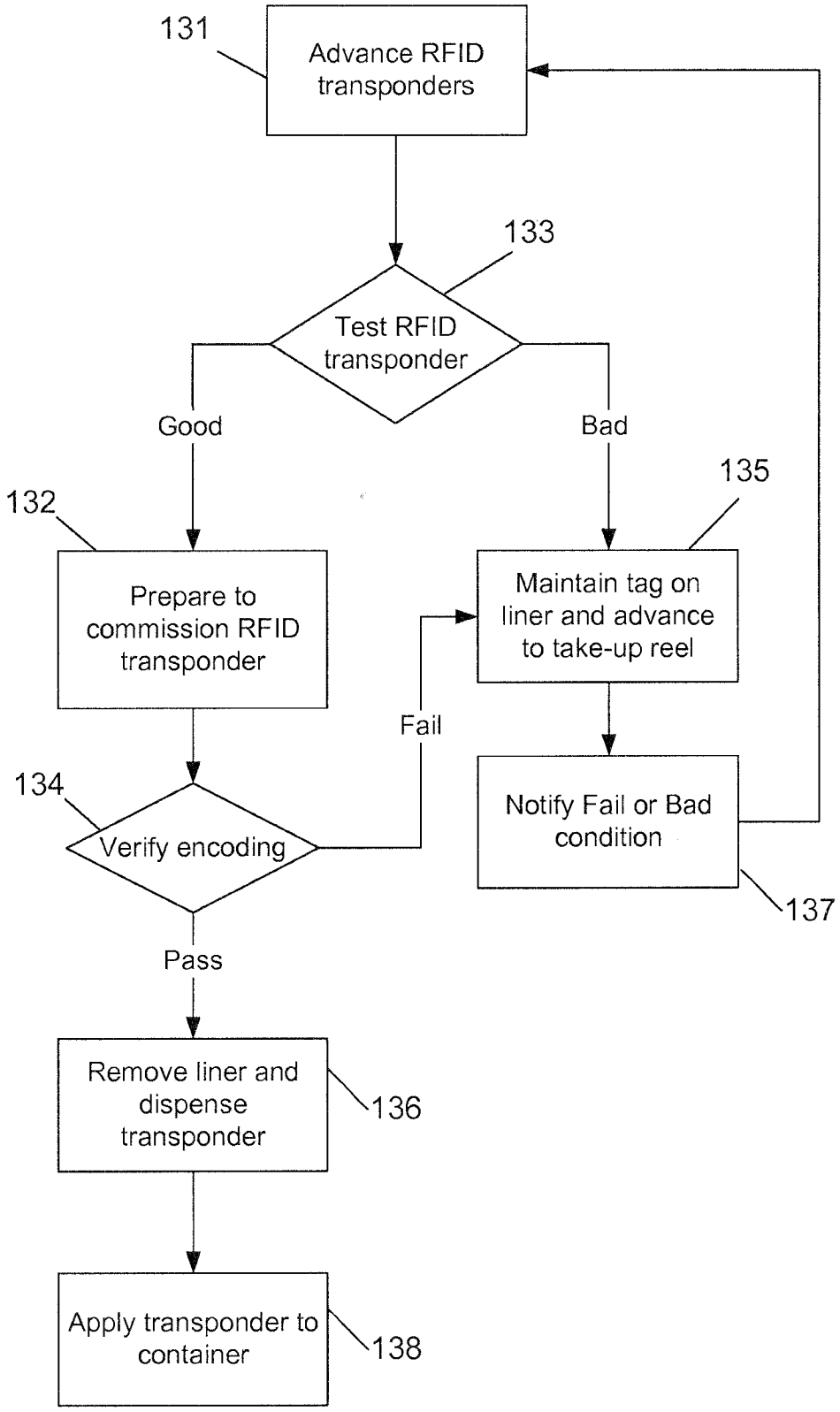

131
Advance RFID transponders
133
Test RFID transponder
Good
Bad
132
Prepare to commission RFID transponder
135
Maintain tag on liner and advance to take-up reel
Fail
134
Verify encoding
Notify Fail or Bad condition
137
Pass
Remove liner and dispense transponder
136
Apply transponder to container
138

Fig. 13

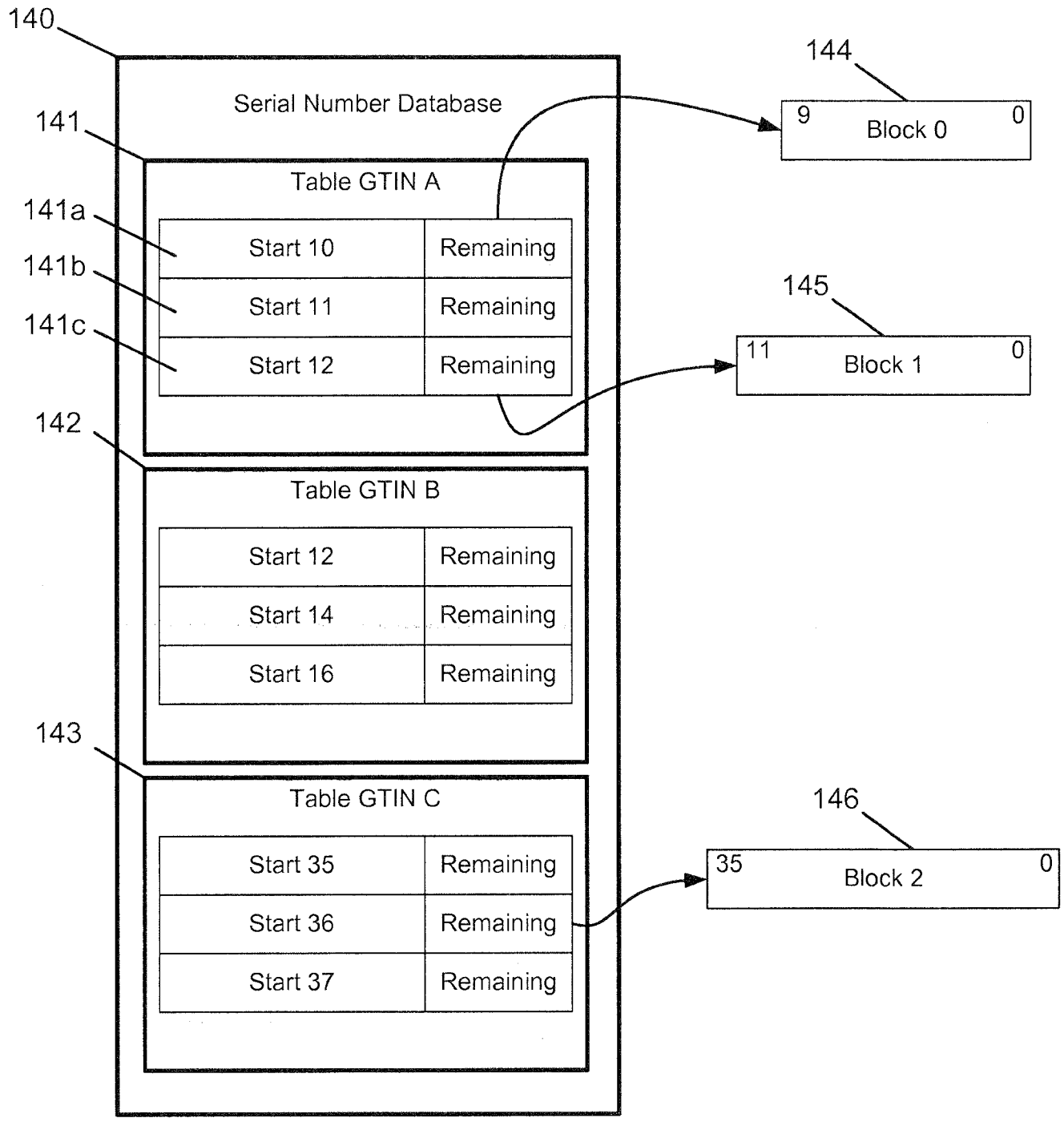

140
Serial Number Database
141
Table GTIN A
141a
141b
141c
Start 10
Remaining
Start 11
Remaining
Start 12
Remaining
142
Table GTIN B
Start 12
Remaining
Start 14
Remaining
Start 16
Remaining
143
Table GTIN C
Start 35
Remaining
Start 36
Remaining
Start 37
Remaining
144
9
Block 0
0
145
11
Block 1
0
146
35
Block 2
0

Fig. 14

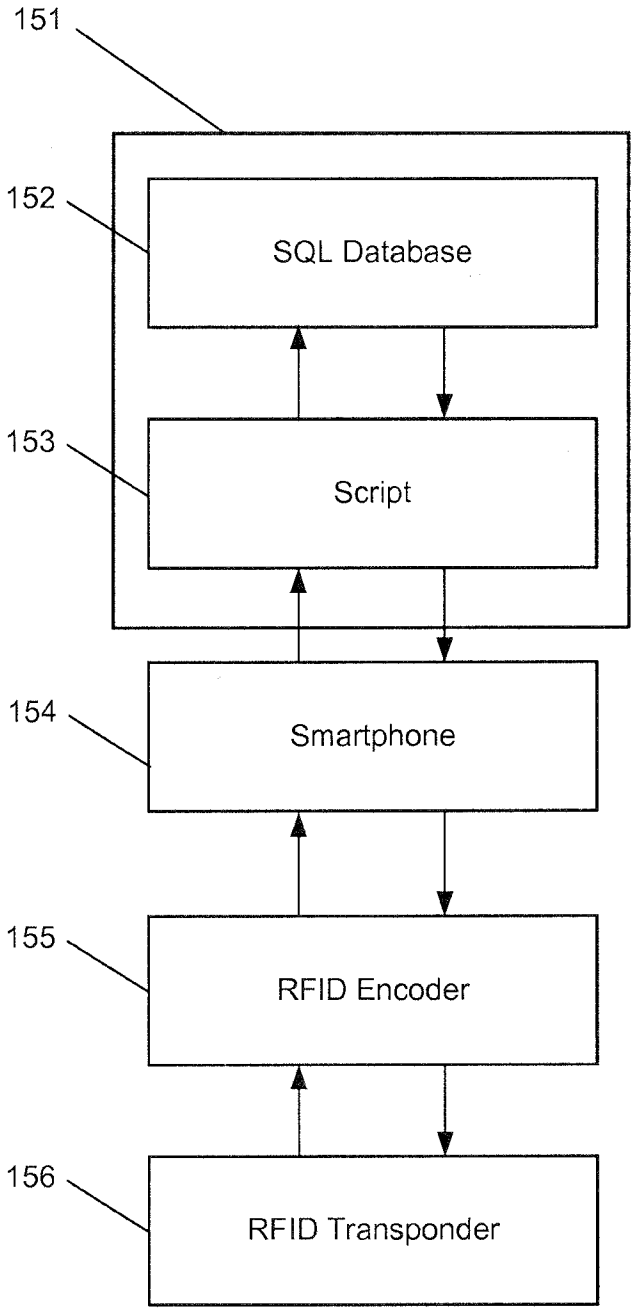

151
152
SQL Database
153
Script
154
Smartphone
155
RFID Encoder
156
RFID Transponder

FIG. 15

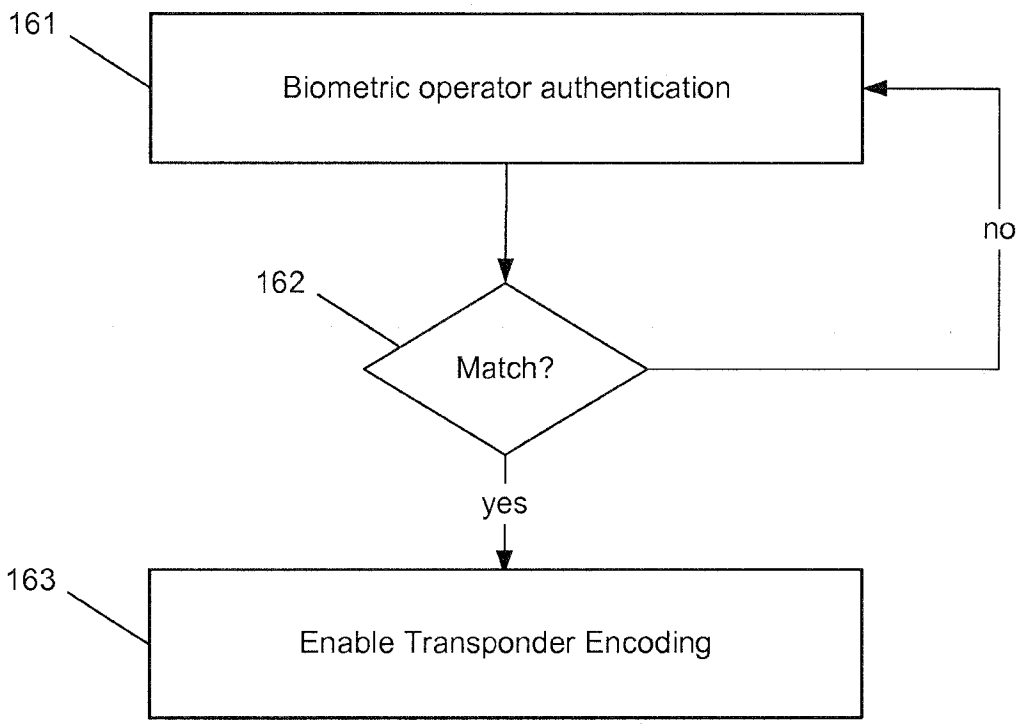

161
Biometric operator authentication
no
162
Match?
yes
163
Enable Transponder Encoding

FIG. 16

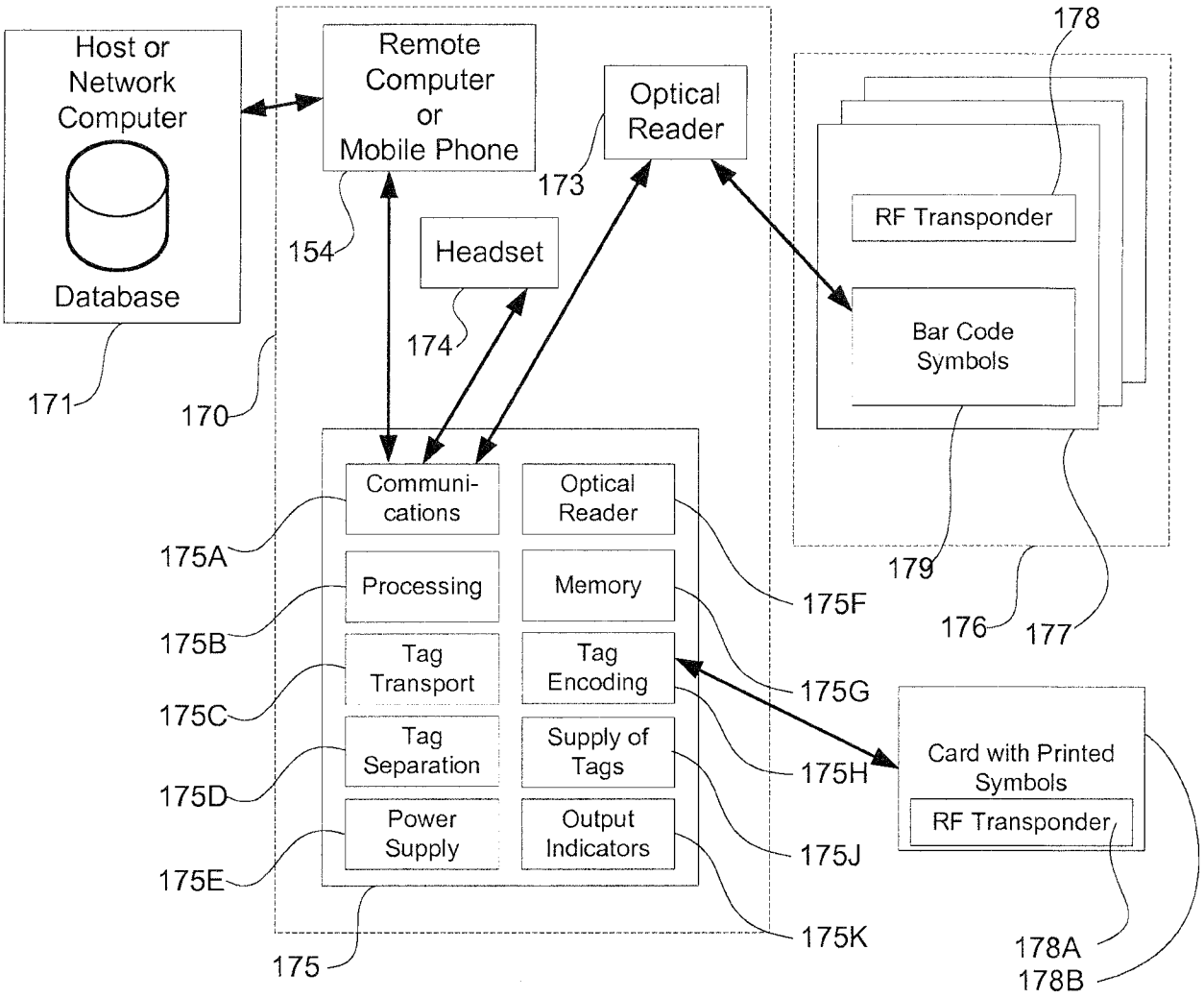

Host or Network Computer
Database
171
Remote Computer or Mobile Phone
154
Optical Reader
173
Headset
174
170
178
RF Transponder
Bar Code Symbols
179
176
177
Communi-cations
Optical Reader
Processing
Memory
Tag Transport
Tag Encoding
Tag Separation
Supply of Tags
Power Supply
Output Indicators
175A
175B
175C
175D
175E
175
175F
175G
175H
175J
175K
Card with Printed Symbols
RF Transponder
178A
178B

FIG. 17

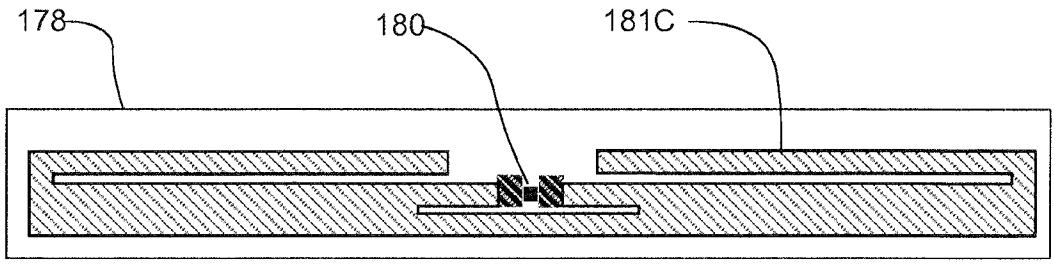


FIG 18

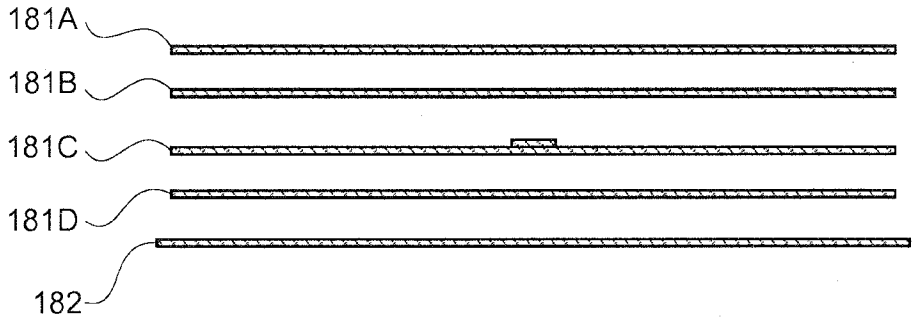


FIG 19

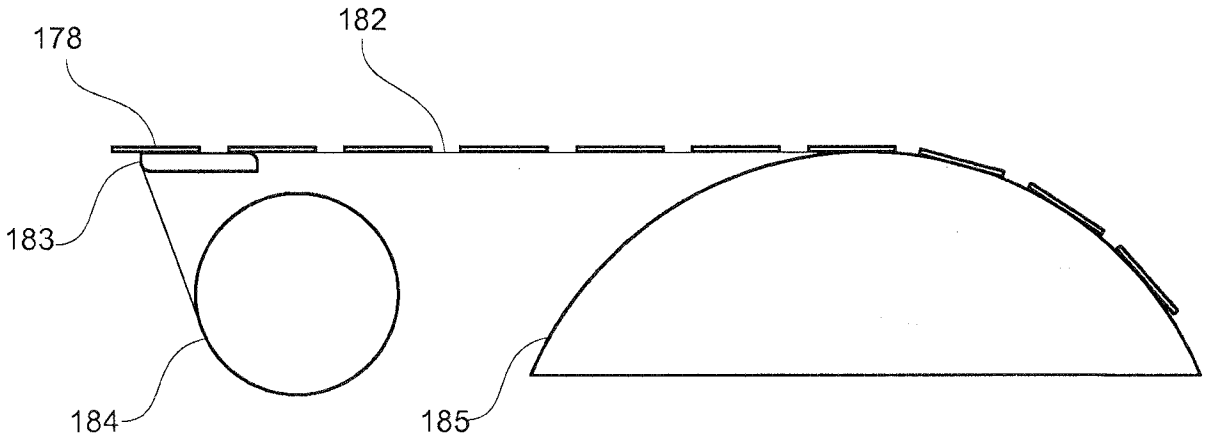


FIG 20

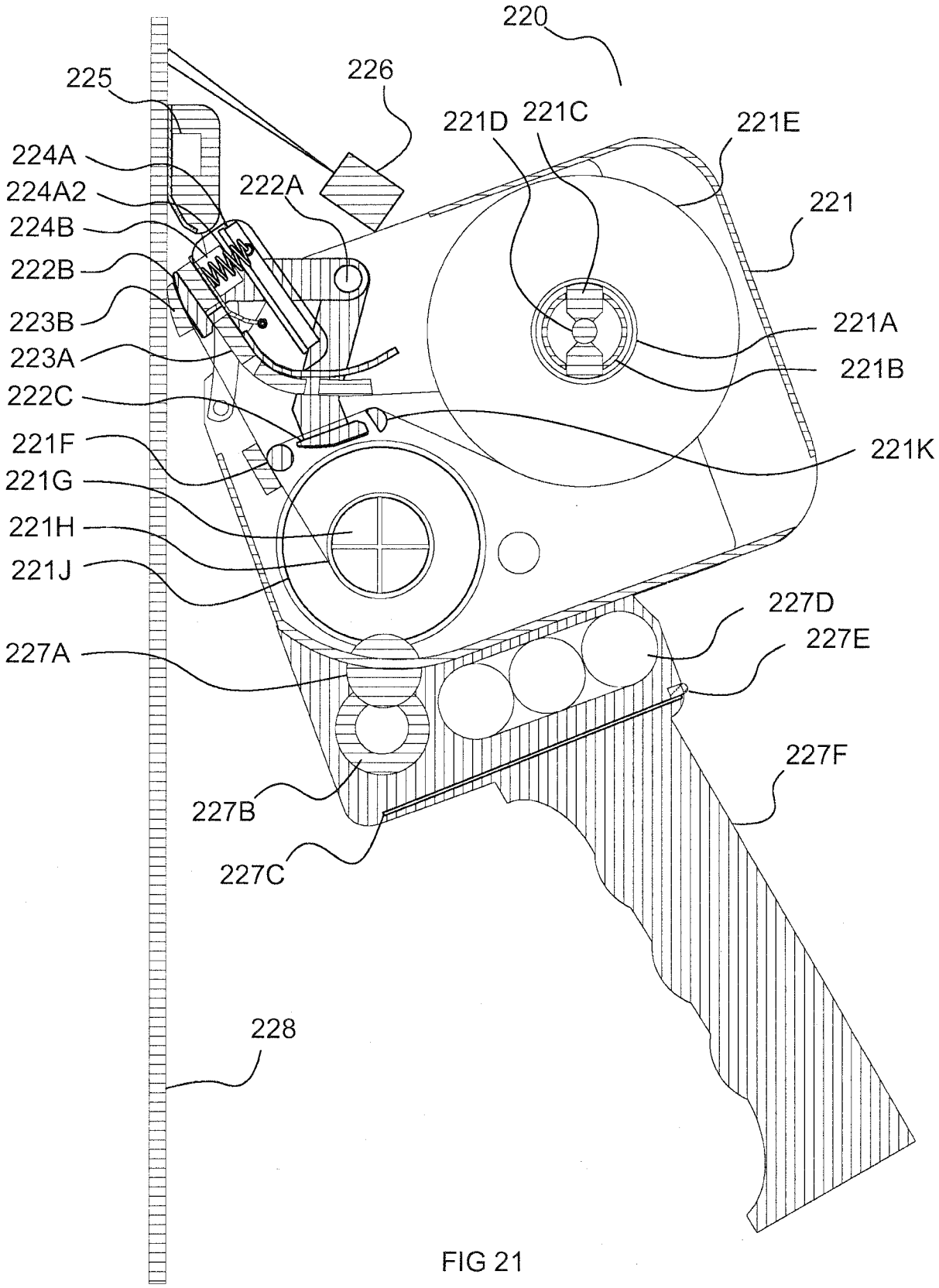

220
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222C
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221F
221G
221H
221J
227D
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227A
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227B
227C
228

FIG 21

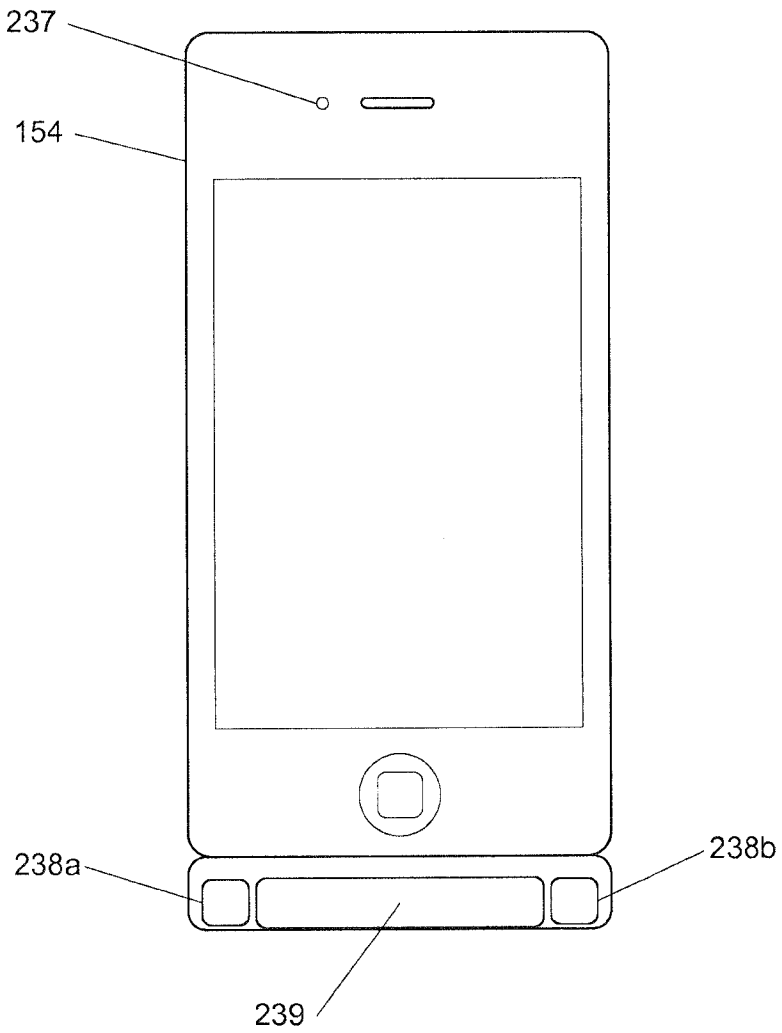


FIG. 22

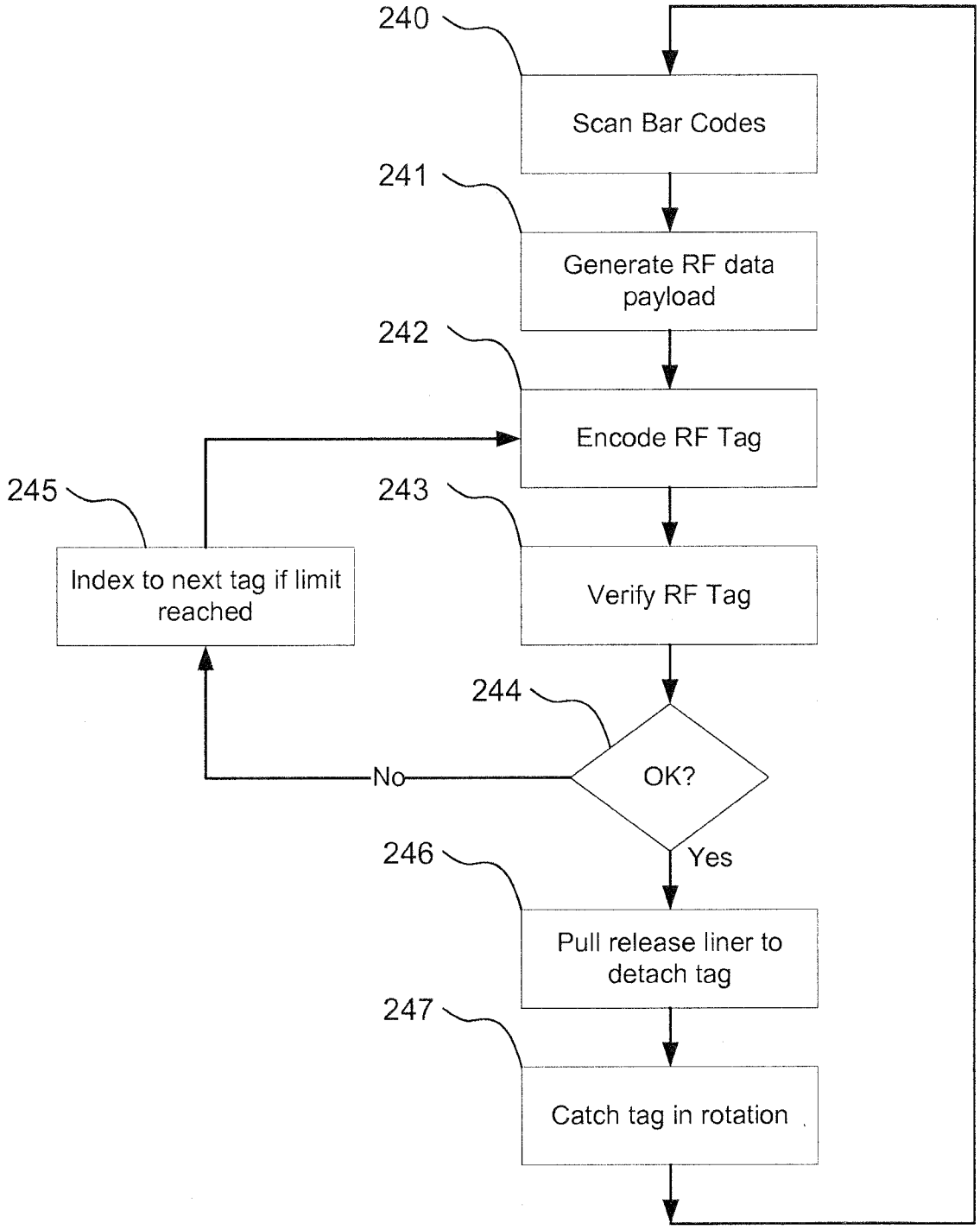

240
Scan Bar Codes
241
Generate RF data payload
242
Encode RF Tag
243
Verify RF Tag
244
OK?
No
Yes
245
Index to next tag if limit reached
246
Pull release liner to detach tag
247
Catch tag in rotation

FIG 23

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	McAllister
Serial No.	:	To be assigned
Filed	:	Herewith
For	:	Systems, Methods, And Devices For Commissioning Wireless Sensors
Group Art Unit	:	To be assigned
Confirmation No.	:	To be assigned
Examiner	:	To be assigned

Mail Stop: New Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRELIMINARY AMENDMENT

Prior to examination and calculation of the filing fee, please amend the above-identified application as follows:

IN THE CLAIMS:

1-16. (Cancelled)

17. (New) An RFID transponder comprising:

a substrate;

an antenna structure formed on the substrate; and

an RFID integrated circuit chip which is electrically coupled to the antenna structure,

wherein the RFID integrated circuit chip is encoded with a unique object number, the unique object number comprising an object class information space and a unique serial number space, and

wherein the unique serial number space has an allocated block stored therein defined by a limited number of most significant bits of the unique serial number space.

18. (New) The RFID transponder of claim 17, wherein remaining bits of lesser significance of the unique serial number space are encoded with a unique serial number for the object class.

19. (New) The RFID transponder of claim 17, wherein the object class information space is encoded with information comprising a company prefix, an item reference, a partition value, and a filter value.

20. (New) The RFID transponder of claim 17, wherein the unique object number is a portion of a serialized global trade item number.

21. (New) The RFID transponder of claim 20, wherein the serialized global trade item number is an EPC SGTIN-96 encoding.

22. (New) The RFID transponder of claim 17, wherein the unique serial number space is at least 38 bits.

SML Exhibit 1003 - Page 120

23. (New) The RFID transponder of claim 17, wherein the allocated block is defined by at least 3 most significant bits.

24. (New) The RFID transponder of claim 17, wherein the allocated block is assigned based at least in part on a block starting serial number and a block size number within the unique serial number space.

25. (New) The RFID transponder of claim 17, wherein the allocated block is one of a plurality of allocations intermittently received by an encoder.

26. (New) The RFID transponder of claim 17, wherein the RFID integrated circuit chip is comprised of silicon.

27. (New) The RFID transponder of claim 17, wherein the RFID integrated circuit chip is comprised of polymer.

28. (New) The RFID transponder of claim 17, wherein the substrate, antenna structure, and RFID integrated circuit chip are covered by a face stock material.

29. (New) The RFID transponder of claim 17, wherein the RFID integrated circuit chip is disposed on the substrate.

30. (New) A RFID transponder comprising:

a substrate;

an antenna structure formed on the substrate; and

an RFID integrated circuit chip which is electrically coupled to the antenna structure,

wherein the RFID integrated circuit chip is encoded with a global trade item number including a unique object number, the unique object number comprising an object class information space including a block of at least 50 bits and a unique serial number space including a block of at least 38 bits, and

SML Exhibit 1003 - Page 121

wherein the unique serial number space has at least one allocated block stored therein defined by at least 3 most significant bits of the unique serial number space.

31. (New) The RFID transponder of claim 30, wherein remaining bits of lesser significance of the unique serial number space are encoded with a unique serial number for the object class.

32. (New) An integrated circuit, comprising:

a radio frequency circuit configured to backscatter a return link signal for processing by an RFID interrogator;

control logic; and

a memory,

wherein the memory is configured with a unique object number space, the unique object number space comprising an object class information space and a unique serial number space, and

wherein the unique serial number space is encoded with an allocated block defined by a limited number of most significant bits of the unique serial number space.

33. (New) The integrated circuit of claim 32, wherein remaining bits of lesser significance of the unique serial number space are encoded with a unique serial number for the object class.

34. (New) The integrated circuit of claim 32, wherein the object class information space is encoded with information comprising a company prefix, an item reference, a partition value, and a filter value.

35. (New) The integrated circuit of claim 32, wherein the unique object number is a portion of a serialized global trade item number.

36. (New) The integrated circuit of claim 35, wherein the serialized global trade item number is an EPC SGTIN-96 encoding.

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REMARKS

Claims 1 - 16 have been cancelled. Claims 17-36 have been added. No new matter has been added. It is respectfully submitted that the presently pending claims are novel, nonobvious and useful and that the present application is in condition for allowance. A prompt and favorable action on the merits is earnestly solicited. The Examiner is invited to contact the undersigned to discuss any matter concerning this application.

Respectfully submitted,

Dated: February 12, 2016

By:___/Michael J. Marcin/_____
Michael J. Marcin (Reg. No. 48,198)
Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, New York 10038
Tel: (212) 619-6000
Fax: (212) 619-0276

SML Exhibit 1003 - Page 123

DECLARATION (37 CRF 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET

Title of Invention	Systems, Methods, and Devices For Commissioning Wireless Sensors

As the below named inventor, I hereby declare that:

This Declaration is directed to:

(X) The attached Application, or
( ) U.S. Application filed on or PCT International Application Serial No.

The above-identified Application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the above-identified Application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

I hereby state that I have reviewed and understand the contents of the above-identified Application including the specification, the claims, and the drawings, as amended by an amendment, if any, specifically referred to in this Declaration.

I acknowledge that I have been informed of the duty to disclose information that is material to the patentability of the above-identified Application as defined in 37 CFR 1.56. I understand that this duty continues through the entire patent application process and ends only with the actual issuance of a U.S. Patent. Therefore, if I become aware of any material information, I will immediately notify the company and/or its attorneys.

LEGAL NAME OF INVENTOR

Inventor: **Clarke W. McAllister**

Signature:  Date: 12 Feb 2016

PTO/AIA/14 (11-15)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30139/00103
	Application Number	
Title of Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 — Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Clarke	W.	McAllister	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	EUGENE	State/Province	OR	Country of Residence	US

Mailing Address of Inventor:

Address 1	4060 SUNRIDGE DRIVE		
Address 2			
City	EUGENE	State/Province	OR
Postal Code	97405	Country i	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ An Address is being provided for the correspondence Information of this application.

Customer Number	30636		
Email Address		Add Email	Remove Email

Application Information:

Title of the Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors		
Attorney Docket Number	30139/00103	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	19	Suggested Figure for Publication (if any)	

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30139/00103
	Application Number	
Title of Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	30636		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	13526520	2012-06-19

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30139/00103
	Application Number	
Title of Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors	

Prior Application Status	Patented			Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13526520	Continuation in part of	12820109	2010-06-21	8228198	2012-07-24
Prior Application Status	Patented			Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12820109	Continuation in part of	11465712	2006-08-18	7830258	2010-11-09
Prior Application Status	Expired			Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
11465712	Claims benefit of provisional	60709713	2005-08-19		
Prior Application Status	Abandoned			Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
12820109	Continuation in part of	12124768	2008-05-21		
Prior Application Status	Expired			Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
12124768	Claims benefit of provisional	60939603	2007-05-22		

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove			
Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30139/00103
	Application Number	
Title of Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors	

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30139/00103
	Application Number	
Title of Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30139/00103
	Application Number	
Title of Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

◯ Assignee	◯ Legal Representative under 35 U.S.C. 117	◯ Joint Inventor
◯ Person to whom the inventor is obligated to assign.	◯ Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Applicant:

Address 1			
Address 2			
City		**State/Province**	
Country		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button.

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30139/00103
	Application Number	
Title of Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors	

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature				Date (YYYY-MM-DD)	2016-02-12
First Name	MICHAEL J.	Last Name	MARCIN	Registration Number	48198

Additional Signature may be generated within this form by selecting the Add button.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30139/00103
	Application Number	
Title of Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	Systems, Methods, And Devices For Commissioning Wireless Sensors
First Named Inventor/Applicant Name:	Clarke W. McAllister
Filer:	Oleg F. Kaplun/Carolisa Chen
Attorney Docket Number:	30139/00103

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility application filing	1011	1	280	280
Utility Search Fee	1111	1	600	600
Utility Examination Fee	1311	1	720	720
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**1600**

Electronic Acknowledgement Receipt

EFS ID:	24906034
Application Number:	15042993
International Application Number:	
Confirmation Number:	7577
Title of Invention:	Systems, Methods, And Devices For Commissioning Wireless Sensors
First Named Inventor/Applicant Name:	Clarke W. McAllister
Customer Number:	30636
Filer:	Oleg F. Kaplun/Carolisa Chen
Filer Authorized By:	Oleg F. Kaplun
Attorney Docket Number:	30139/00103
Receipt Date:	12-FEB-2016
Filing Date:	
Time Stamp:	16:33:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$1600
RAM confirmation Number	3346
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		00103ConAppln12Feb16.pdf	12851931 599efe89df0acb0af8749a233d21638cdd0b2b54	yes	132

Multipart Description/PDF files in .zip description

Document Description	Start	End
Transmittal of New Application	1	2
Specification	3	93
Claims	94	98
Abstract	99	99
Drawings-only black and white line drawings	100	118
Preliminary Amendment	119	123
Oath or Declaration filed	124	124
Application Data Sheet	125	132

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	34827 48aa79729fbe7aa462593760fe2cb9bdb319420a	no	2

Warnings:

Information:

Total Files Size (in bytes):	12886758

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/042,993	Filing Date 02/12/2016	☐ To be Mailed

ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	02/12/2016	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X $80 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X $420 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	0

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/CORALIA BETANCOURT/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 15/042,993

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	280
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	600
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	720
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*			OR	x 80 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*				x 420 =	0.00
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1600

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)		RATE($)	ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
15/042,993	02/12/2016	2683	1600	30139/00103	20	3

CONFIRMATION NO. 7577

30636
FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

FILING RECEIPT

OC000000081009285

Date Mailed: 03/01/2016

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Clarke W. McAllister, EUGENE, OR;

Applicant(s)

Clarke W. McAllister, EUGENE, OR;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 13/526,520 06/19/2012 PAT 9272805
which is a CIP of 12/820,109 06/21/2010 PAT 8228198 *
which is a CIP of 11/465,712 08/18/2006 PAT 7830258
which claims benefit of 60/709,713 08/19/2005
and said 12/820,109 06/21/2010
is a CIP of 12/124,768 05/21/2008 ABN
which claims benefit of 60/939,603 05/22/2007
(*)Data provided by applicant is not consistent with PTO records.

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 02/29/2016

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/042,993**

Projected Publication Date: 06/09/2016

Non-Publication Request: No

Early Publication Request: No

Title

Systems, Methods, And Devices For Commissioning Wireless Sensors

Preliminary Class

340

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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SML Exhibit 1003 - Page 143

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103

CONFIRMATION NO. 7577

30636
FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

PUBLICATION NOTICE

OC000000083538918

Title: Systems, Methods, And Devices For Commissioning Wireless Sensors

Publication No.US-2016-0162773-A1
Publication Date:06/09/2016

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

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Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103	7577

30636 7590 02/14/2017

FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

EXAMINER
MULLEN, THOMAS J

ART UNIT	PAPER NUMBER
2685	

MAIL DATE	DELIVERY MODE
02/14/2017	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 15/042,993	Applicant(s) MCALLISTER, CLARKE W.	
	Examiner THOMAS MULLEN	Art Unit 2685	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5)☒ Claim(s) *17-36* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *17-36* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☒ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *2/12/16* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

1. The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

STATUS OF PRIOR RELATED APPLICATION(S)

2. The parent application 13/526,520, and its corresponding patent number (US 9272805), should be referenced on p. 1 of the specification in the appropriate place; and the patent number associated with prior application 12/820,109 (US 8228198) should similarly be inserted in the appropriate place, in the same paragraph on p. 1.

DOUBLE PATENTING REJECTION(S)

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP §§ 706.02(l)(1) - 706.02(l)(3) for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

4. Claims 17-36 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 9,272,805 (which issued from parent application 13/526,520). Although the claims at issue are not identical, they are not patentably distinct from each other because the '805 patent claims are identical to the presently pending claims except for having an additional recitation at the end of each independent claim ('805 patent claims 1, 14 and 16)--i.e., "as designated by an external numbering authority". Thus, the subject matter of the present claims is obvious in view of the '805 patent claims.

ALLOWABLE SUBJECT MATTER

5. No rejection of claims 17-36 under 35 U.S.C. 102/103 is considered appropriate at this time.

PRIOR ART CITED

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

McAllister (US 8228198--issued from grandparent app. 12/820,109), Hartmann et al (US 2005/7238), Geissler (US 2007/103314) and Bauhahn (US 2004/46644) were cited and/or relied upon in the parent application.

CONCLUSION

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Mullen whose telephone number is (571)272-2965. The examiner can normally be reached on Mon.-Fri. (alternate Fridays) from 7:30 to 4:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hai Phan, can be reached on 571-272-6338. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://portal.uspto.gov/external/portal. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Thomas J. Mullen/
Primary Examiner
Art Unit 2685

Notice of References Cited	Application/Control No. 15/042,993	Applicant(s)/Patent Under Reexamination MCALLISTER, CLARKE W.	
	Examiner THOMAS MULLEN	Art Unit 2685	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-9,272,805 B2	03-2016	McAllister; Clarke William	B65C9/1865	1/1
*	B	US-8,228,198 B2	07-2012	McAllister; Clarke	B65C9/1865	340/10.51
*	C	US-2005/0007238 A1	01-2005	Hartmann, Clinton S.	G06K7/0008	340/10.2
*	D	US-2007/0103314 A1	05-2007	Geissler; Randolph K.	A01K11/004	340/572.8
*	E	US-2004/0046644 A1	03-2004	Bauhahn, Paul E.	G06K7/10019	340/10.42
	F	US-				
	G	US-				
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	115	(allocat$3 apportion$3 assign$4 send$3 sent receive received receives receiving download$3 upload$3) near5 (((block$1 cluster$1 group$1 range$1 list$1 set$1 sub$1set$1) near2 ((serial identif$7) adj (number$1 code codes))) near10 (tag$1 transponder$1))	US-PGPUB; USPAT	OR	OFF	2017/02/09 15:23
L3	4493	G06K2017/0045,0051.cpc. G06K19/077,07716.cpc. B65C9/1865.cpc. B65C11/006.cpc.	US-PGPUB; USPAT	OR	OFF	2017/02/09 15:26
L4	42978	((340/572.1-572.9,10.1-10.6) or (709/217) or (705/28)).CCLS.	US-PGPUB; USPAT	OR	OFF	2017/02/09 15:27
L5	36575	((serial identif$7) adj (number$1 code codes)) near3 (block$1 set$1 subset$1 cluster$1 group$1 range$1 list$1)	US-PGPUB; USPAT	OR	OFF	2017/02/09 15:27
L6	166	L5 same ((writ$3 encod$3 program$5) near2 ((wireless rf "radio frequency" rf$1id) adj (tag$1 transponder$1)))	US-PGPUB; USPAT	OR	OFF	2017/02/09 15:27
L7	289	((unique serial) adj2 number$1) same (block$1 near5 bits)	US-PGPUB; USPAT	OR	OFF	2017/02/09 15:28
L8	50	2 and (3 4)	US-PGPUB; USPAT	OR	OFF	2017/02/09 15:28
L9	42	6 and (3 4)	US-PGPUB; USPAT	OR	OFF	2017/02/09 15:28
L10	21	7 and (3 4)	US-PGPUB; USPAT	OR	OFF	2017/02/09 15:29

EAST Search History (Interference)

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
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www.uspto.gov

BIB DATA SHEET

CONFIRMATION NO. 7577

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
15/042,993	02/12/2016	340	2685	30139/00103

APPLICANTS

INVENTORS

Clarke W. McAllister, EUGENE, OR;

**** CONTINUING DATA ***************************

This application is a CON of 13/526,520 06/19/2012 PAT 9272805
which is a CIP of 12/820,109 06/21/2010 PAT 8228198 *
which is a CIP of 11/465,712 08/18/2006 PAT 7830258
which claims benefit of 60/709,713 08/19/2005
and said 12/820,109 06/21/2010
is a CIP of 12/124,768 05/21/2008 ABN
which claims benefit of 60/939,603 05/22/2007
(*)Data provided by applicant is not consistent with PTO records.

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****

02/29/2016

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☑ No Verified and Acknowledged /THOMAS J MULLEN/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		OR	19	20	3

ADDRESS

FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038
UNITED STATES

TITLE

Systems, Methods, And Devices For Commissioning Wireless Sensors

FILING FEE RECEIVED		
1600	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15042993	MCALLISTER, CLARKE W.
	Examiner	Art Unit
	THOMAS MULLEN	2685

CPC- SEARCHED		
Symbol	Date	Examiner
G06K 2017/0045,0051; 19/077,07716	2/9/17	TM
B65C 9/1865, 11/006	2/9/17	TM

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
340	572.1-572.9,10.1-10.6	2/9/17	TM
709	217	2/9/17	TM
705	28	2/9/17	TM

SEARCH NOTES		
Search Notes	Date	Examiner
EAST (text-limited CPC & USPC classes/subs, see scanned search history)	2/9/17	TM

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15042993	MCALLISTER, CLARKE W.
	Examiner	Art Unit
	THOMAS MULLEN	2685

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	02/09/2017								
	1	-								
	2	-								
	3	-								
	4	-								
	5	-								
	6	-								
	7	-								
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	34	✓								
	35	✓								
	36	✓								

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	McAllister
Serial No.	:	15/042,993
Filed	:	February 12, 2016
For	:	Systems, Methods, And Devices For Commissioning Wireless Sensors
Group Art Unit	:	2685
Confirmation No.	:	7577
Examiner	:	Thomas J Mullen

Mail Stop: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT

In response to the Non-Final Office Action mailed February 14, 2017 in the above-referenced application, please enter the following amendments and consider the following remarks.

SML Exhibit 1003 - Page 155

IN THE SPECIFICATION

Please amend the specification as follows:

Immediately following the Title on page 1 of the Specification, please add the following heading and paragraph:

RELATED APPLICATIONS

The present application is a continuation application based on U.S. Application Ser. No. 13/526,520, filed on June 19, 2012, now U.S. Pat. No. 9,272,805, which is a continuation-in-part application based on U.S. Application Ser. No. 12/820,109, filed on June 21, 2010, now U.S. Pat. No. 8,228,198, which is a continuation-in-part application of U.S. Application Ser. No. 11/465,712, filed on August 18, 2006, now U.S. Pat. No. 7,830,258, which claims the benefit of U.S. Provisional Application No. 60/709,713 filed on August 19, 2005, and a continuation-in-part application of U.S. Application Ser. No. 12,124,768, filed on May 21, 2008, now abandoned, which claims the benefit of U.S. Provisional Application No. 60,939,603 filed on May 22, 2007. The present application claims priority from these applications, the disclosures of which are hereby expressly incorporated herein by reference.

SML Exhibit 1003 - Page 156

REMARKS

No new matter has been added. Claims 17-36 are pending in the present application. Applicant thanks the Examiner for indicating that claims 17-36 contain allowable subject matter. In view of the following remarks, Applicant respectfully submits that all presently pending claims are in condition for allowance.

Claims 17-36 stand provisionally rejected under the ground of non-statutory double patenting over claims 1-20 of U.S. Patent No. 9,272,805. (*See* 02/14/2017 Office Action, p. 3.) Applicant has filed a Terminal Disclaimer with this Amendment. Therefore, the withdrawal of the non-statutory Double Patenting rejections is respectfully requested.

In view of the foregoing, it is respectfully submitted that all of the currently pending claims are in condition for allowance. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

Dated: May 15, 2017

By:__/Michael J. Marcin/_____
Michael Marcin (Reg. No. 48,198)

Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, NY 10038
Phone: 212-619-6000
Fax: 212-619-0276

SML Exhibit 1003 - Page 157

PTO/SB/26 (01-08)
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TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT	Docket Number (Optional) 30139/00103

In re Application of: McAllister

Application No.: 15/042,993

Filed: 9/23/2013

For: Systems, Methods, and Devices for Commissioning Wireless Sensors

The owner*, ADASA INC., of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term **prior patent** No. 9,272,805 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said **prior patent** is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

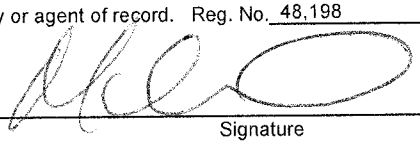
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. ☑ The undersigned is an attorney or agent of record. Reg. No. 48,198



Signature

3/23/17

Date

Michael J. Marcin

Typed or printed name

212-619-6000

Telephone Number

☑ Terminal disclaimer fee under 37 CFR 1.20(d) included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: ADASA INC.

Application No./Patent No.: 9,272,805 Filed/Issue Date: March 1, 2016

Titled: Systems, Methods, And Devices For Commissioning Wireless Sensors

ADASA INC., a corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☑ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 037854, Frame 0923, or for which a copy thereof is attached.

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

   1. From: _____ To: _____

      The document was recorded in the United States Patent and Trademark Office at

      Reel _____, Frame _____, or for which a copy thereof is attached.

   2. From: _____ To: _____

      The document was recorded in the United States Patent and Trademark Office at

      Reel _____, Frame _____, or for which a copy thereof is attached.

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature	Date: 3/23/17
Michael J. Marcin, Esq.	48,198
Printed or Typed Name	Title or Registration Number

PTO/AIA/96 (08-12)
Approved for use through 01/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: ADASA INC.

Application No./Patent No.: 13/526,520 Filed/Issue Date: June 19, 2012

Titled: Systems, Methods, And Devices For Commissioning Wireless Sensors

ADASA INC., a corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

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A. ☑ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 037854, Frame 0923, or for which a copy thereof is attached.

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

   1. From: _____ To: _____

      The document was recorded in the United States Patent and Trademark Office at

      Reel _____, Frame _____, or for which a copy thereof is attached.

   2. From: _____ To: _____

      The document was recorded in the United States Patent and Trademark Office at

      Reel _____, Frame _____, or for which a copy thereof is attached.

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

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☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature	Date: 3/23/17
Michael J. Marcin, Esq.	48,198
Printed or Typed Name	Title or Registration Number

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	McAllister
Serial No.	:	15/042,993
Filed	:	February 12, 2016
For	:	Systems, Methods, And Devices For Commissioning Wireless Sensors
Group Art Unit	:	2685
Confirmation No.	:	7577
Examiner	:	Thomas J Mullen

Mail Stop: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT

In response to the Non-Final Office Action mailed February 14, 2017 in the above-referenced application, please enter the following amendments and consider the following remarks.

SML Exhibit 1003 - Page 163

IN THE SPECIFICATION

Please amend the specification as follows:

Immediately following the Title on page 1 of the Specification, please add the following heading and paragraph:

RELATED APPLICATIONS

The present application is a continuation application based on U.S. Application Ser. No. 13/526,520, filed on June 19, 2012, now U.S. Pat. No. 9,272,805, which is a continuation-in-part application based on U.S. Application Ser. No. 12/820,109, filed on June 21, 2010, now U.S. Pat. No. 8,228,198, which is a continuation-in-part application of U.S. Application Ser. No. 11/465,712, filed on August 18, 2006, now U.S. Pat. No. 7,830,258, which claims the benefit of U.S. Provisional Application No. 60/709,713 filed on August 19, 2005, and a continuation-in-part application of U.S. Application Ser. No. 12,124,768, filed on May 21, 2008, now abandoned, which claims the benefit of U.S. Provisional Application No. 60,939,603 filed on May 22, 2007. The present application claims priority from these applications, the disclosures of which are hereby expressly incorporated herein by reference.

SML Exhibit 1003 - Page 164

REMARKS

No new matter has been added. Claims 17-36 are pending in the present application. Applicant thanks the Examiner for indicating that claims 17-36 contain allowable subject matter. In view of the following remarks, Applicant respectfully submits that all presently pending claims are in condition for allowance.

Claims 17-36 stand provisionally rejected under the ground of non-statutory double patenting over claims 1-20 of U.S. Patent No. 9,272,805. (*See* 02/14/2017 Office Action, p. 3.) Applicant has filed a Terminal Disclaimer with this Amendment. Therefore, the withdrawal of the non-statutory Double Patenting rejections is respectfully requested.

In view of the foregoing, it is respectfully submitted that all of the currently pending claims are in condition for allowance. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

Dated: May 15, 2017

By:__/Michael J. Marcin/_____
Michael Marcin (Reg. No. 48,198)

Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, NY 10038
Phone: 212-619-6000
Fax: 212-619-0276

SML Exhibit 1003 - Page 165

PTO/SB/26 (01-08)
Approved for use through 03/31/2008. OMB 0651-0031
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TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT	Docket Number (Optional) 30139/00103

In re Application of: McAllister

Application No.: 15/042,993

Filed: 9/23/2013

For: Systems, Methods, and Devices for Commissioning Wireless Sensors

The owner*, ADASA INC., of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term **prior patent** No. 9,272,805 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said **prior patent** is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

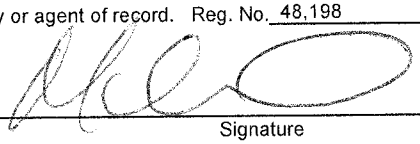
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. ☑ The undersigned is an attorney or agent of record. Reg. No. 48,198



Signature

3/23/17

Date

Michael J. Marcin

Typed or printed name

212-619-6000

Telephone Number

☑ Terminal disclaimer fee under 37 CFR 1.20(d) included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: ADASA INC.

Application No./Patent No.: 9,272,805 Filed/Issue Date: March 1, 2016

Titled: Systems, Methods, And Devices For Commissioning Wireless Sensors

ADASA INC., a corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☑ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 037854, Frame 0923, or for which a copy thereof is attached.

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

   1. From: _____ To: _____

      The document was recorded in the United States Patent and Trademark Office at

      Reel _____, Frame _____, or for which a copy thereof is attached.

   2. From: _____ To: _____

      The document was recorded in the United States Patent and Trademark Office at

      Reel _____, Frame _____, or for which a copy thereof is attached.

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/AIA/96 (08-12)
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STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

_____ 3/23/17
Signature Date

Michael J. Marcin, Esq. 48,198
Printed or Typed Name Title or Registration Number

PTO/AIA/96 (08-12)
Approved for use through 01/31/2013. OMB 0651-0031
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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: ADASA INC.

Application No./Patent No.: 13/526,520 Filed/Issue Date: June 19, 2012

Titled: Systems, Methods, And Devices For Commissioning Wireless Sensors

ADASA INC., a corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☑ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 037854, Frame 0923, or for which a copy thereof is attached.

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

   1. From: _____ To: _____

      The document was recorded in the United States Patent and Trademark Office at

      Reel _____, Frame _____, or for which a copy thereof is attached.

   2. From: _____ To: _____

      The document was recorded in the United States Patent and Trademark Office at

      Reel _____, Frame _____, or for which a copy thereof is attached.

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

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Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature	Date: 3/23/17
Michael J. Marcin, Esq.	48,198
Printed or Typed Name	Title or Registration Number

Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82B (07-13)
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POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date
15/042,993	February 12, 2016

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 30636

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☐ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

☐ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	/Clarke McAllister/	Date (Optional)	23 March 2017
Name	Clarke W. McAllister		
Title	President, ADASA Inc.		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ Total of forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Patent Application Fee Transmittal

Application Number:	15042993
Filing Date:	12-Feb-2016
Title of Invention:	Systems, Methods, And Devices For Commissioning Wireless Sensors
First Named Inventor/Applicant Name:	Clarke W. McAllister
Filer:	Oleg F. Kaplun/sandy gellineau
Attorney Docket Number:	30139/00103

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
STATUTORY OR TERMINAL DISCLAIMER	1814	1	160	160
		Total in USD ($)		**160**

Electronic Acknowledgement Receipt

EFS ID:	28721518
Application Number:	15042993
International Application Number:	
Confirmation Number:	7577
Title of Invention:	Systems, Methods, And Devices For Commissioning Wireless Sensors
First Named Inventor/Applicant Name:	Clarke W. McAllister
Customer Number:	30636
Filer:	Oleg F. Kaplun/sandy gellineau
Filer Authorized By:	Oleg F. Kaplun
Attorney Docket Number:	30139/00103
Receipt Date:	23-MAR-2017
Filing Date:	12-FEB-2016
Time Stamp:	16:26:53
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$160
RAM confirmation Number	032417INTEFSW16275700
Deposit Account	501492
Authorized User	sandy gellineau

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		00103response23March17.pdf	1777169 58375694b93d64f55d74d5e3226299da02830274	yes	10

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Transmittal Letter	1	1
Amendment/Req. Reconsideration-After Non-Final Reject	2	4
Terminal Disclaimer Filed	5	5
Assignee showing of ownership per 37 CFR 3.73	6	9
Power of Attorney	10	10

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30662 60d7d06dea479e625c15398f8fa2a466d187944e	no	2

Warnings:

Information:

Total Files Size (in bytes):	1807831

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Attorney Docket No.30139/00103

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s)	:	Adasa Inc.
Inventor(s)	:	McAllister
Serial No.	:	15/042,993
Filed	:	February 12, 2016
For	:	Systems, Methods, and Devices for Commissioning Wireless Sensors
Group Art Unit	:	7577
Confirmation No	:	2685
Examiner	:	Thomas J. Mullen

Certificate of Facsimile / Electronic Filing
I hereby certify that this correspondence is being deposited via facsimile or Electronic Filing addressed to:

Mail Stop: Amendments
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
571-273-8300

By: _____ Date: March 23, 2017
Michael J. Marcin (Reg. No. 48,198)

Mail Stop: Amendments
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL

Transmitted herewith please find a Response to the Non-Final Office Action mailed on February 14, 2017 along with one (1) Terminal Disclaimer and Statements under 37 CFR 3.73(c) and an executed Power of Attorney for filing in the above-identified application. Please charge the credit card of Fay Kaplun & Marcin, LLP in the amount of $160.00 for the filing fees. The Commissioner is hereby authorized to charge any additional required fees to the Deposit Account of **Fay Kaplun & Marcin, LLP No. 50-1492**.

Respectfully submitted,

Dated: March 23, 2017

By:_____
Michael J. Marcin (Reg. No. 48,198)
Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, NY 10038
Tel: (212) 619-6000/Fax: (212) 619-0276

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	15/042,993	MCALLISTER, CLARKE W.	

Document Code - DISQ	Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	☐ APPROVED	☒ DISAPPROVED
Date Filed : 23 March, 2017	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:

/CRYSTAL QUEEN/

Technology Center: PLRC

Telephone:

The terminal disclaimer identifies a party who is not the applicant (only for applications filed on or after September 16, 2012; See FP 14.26.10):

Below is what needs to be done to correct the defects:

For cases filed on/after 9/16/12, 37 CFR 1.321 specifies that the applicant can disclaim, and the terminal disclaimer must specify the extent of the applicant's ownership.

A request under 37 CFR 1.46(c) to change the applicant needs to be filed, which is (1) a request, signed by a 1.33(b) party, (2) a corrected ADS (37 CFR 1.76(c)) that identifies the "new" applicant in the applicant information, and is underlined since it is new, and (3) a 3.73(c) statement showing chain of title to the new applicant. Along with the § 1.46(c) request we need a POA that gives power to the attorney who is signing the TD, along with another copy of the TD, unless they file a TD that is signed by the applicant.

NOTE: applicant name should be listed under the applicant section of the ADS, also POA is needed, see N572.

The TD must be re-filed; no new fees are due.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103

CONFIRMATION NO. 7577

IMPROPER CPOA LETTER

30636
FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

OC000000090274566

Date Mailed: 03/29/2017

NOTICE REGARDING POWER OF ATTORNEY

This is in response to the power of attorney filed 03/23/2017. The power of attorney in this application is not accepted for the reason(s) listed below:

- The power of attorney has not been accepted because the party who is giving power has not been identified. Power of attorney may only be signed by the applicant for patent (37 CFR 1.42) or the patent owner. A party who is not the applicant must become the applicant in accordance with 37 CFR 1.46(c) and appoint any power of attorney in compliance with 37 CFR 3.71 and 3.73. For a reissue application, reexamination proceeding, or supplemental examination proceeding, a patent owner who was not the applicant under 37 CFR 1.46 must appoint any power of attorney in compliance with 37 CFR 3.71 and 3.73. See 37 CFR 1.32(b)(4).

/afessehaye/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103

CONFIRMATION NO. 7577

IMPROPER CFR REQUEST

30636
FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038



Date Mailed: 03/29/2017

RESPONSE TO REQUEST FOR CORRECTED FILING RECEIPT

Power of Attorney, Claims, Fees, System Limitations, and Miscellaneous

In response to your request for a corrected Filing Receipt, the Office is unable to comply with your request because:

- Any request to correct or update the name of the applicant must include an application data sheet (ADS) in compliance with 37 CFR 1.76 specifying the correct or updated name of the applicant in the applicant information section. Any request to change the applicant after an original applicant has been specified under 37 CFR 1.46(b) must include a new ADS in compliance with 37 CFR 1.76 specifying the applicant in the applicant information section and comply with 37 CFR 3.71 and 3.73. See 37 CFR 1.46(c).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/afessehaye/

Attorney Docket No.30139/00103

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s)	:	Adasa Inc.
Inventor(s)	:	McAllister
Serial No.	:	15/042,993
Filed	:	February 12, 2016
For	:	Systems, Methods, and Devices for Commissioning Wireless Sensors
Group Art Unit	:	7577
Confirmation No	:	2685
Examiner	:	Thomas J. Mullen

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CORRECTED FILING RECEIPT

Applicant hereby requests that the Filing Receipt of the above-identified application be corrected. In particular, the Filing Receipt should be corrected to show the following: Applicant "**ADASA INC.**" as indicated in the Application Data Sheet. Therefore, please issue a Corrected Filing Receipt. A copy of the Filing Receipt with hand written corrections and the Originally filed Application Data Sheet showing changes is enclosed herewith.

Respectfully submitted,

Dated: 4/12/2017

By: _____
Michael J. Marcin (Reg. No. 48,198)
Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, N.Y. 10038
(212) 619-6000 (telephone)
(212) 619-0276 (facsimile)

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
15/042,993	02/12/2016	2683	1600	30139/00103	20	3

CONFIRMATION NO. 7577

FILING RECEIPT

30636
FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

OC000000081009285

Date Mailed: 03/01/2016

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Clarke W. McAllister, EUGENE, OR;

Applicant(s)

~~Clarke W. McAllister, EUGENE, OR;~~

Power of Attorney: None ADASA Inc.

Domestic Priority data as claimed by applicant

✓This application is a CON of 13/526,520 06/19/2012 PAT 9272805
which is a CIP of 12/820,109 06/21/2010 PAT 8228198 *
✓which is a CIP of 11/465,712 08/18/2006 PAT 7830258
✓which claims benefit of 60/709,713 08/19/2005
✓and said 12/820,109 06/21/2010
✓is a CIP of 12/124,768 05/21/2008 ABN
✓which claims benefit of 60/939,603 05/22/2007
(*)Data provided by applicant is not consistent with PTO records.

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

SML Exhibit 1003 - Page 182

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 02/29/2016

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/042,993**

Projected Publication Date: 06/09/2016

Non-Publication Request: No

Early Publication Request: No

Title

/ Systems, Methods, And Devices For Commissioning Wireless Sensors

Preliminary Class

340

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

SML Exhibit 1003 - Page 185

Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82B (07-13)
Approved for use through 11/30/2014. OMB 0651-0051
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date
15/042,993	February 12, 2016

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 30636

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☐ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

ADASA Inc.

☐ Inventor or Joint Inventor (title not required below)
☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)
☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)
☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	/Clarke McAllister/	Date (Optional)	12 April, 2017
Name	Clarke W. McAllister		
Title	President, ADASA Inc.		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☐ Total of forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/AIA/96 (08-12)
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STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: ADASA INC.

Application No./Patent No.: 9,272,805 Filed/Issue Date: March 1, 2016

Titled: Systems, Methods, And Devices For Commissioning Wireless Sensors

ADASA INC., a corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. [✓] The assignee of the entire right, title, and interest.

2. [ ] An assignee of less than the entire right, title, and interest (check applicable box):

   [ ] The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   [ ] There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. [ ] The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. [ ] The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. [✓] An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 037854, Frame 0923, or for which a copy thereof is attached.

B. [ ] A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

   1. From: _____ To: _____

      The document was recorded in the United States Patent and Trademark Office at

      Reel _____, Frame _____, or for which a copy thereof is attached.

   2. From: _____ To: _____

      The document was recorded in the United States Patent and Trademark Office at

      Reel _____, Frame _____, or for which a copy thereof is attached.

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

_____ 4/12/17
Signature Date

Michael J. Marcin, Esq. 48,198
Printed or Typed Name Title or Registration Number

PTO/AIA/96 (08-12)
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STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: ADASA INC.

Application No./Patent No.: 15/042,993 Filed/Issue Date: February 12, 2016

Titled: Systems, Methods, And Devices For Commissioning Wireless Sensors

ADASA INC., a corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☑ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 037854, Frame 0923, or for which a copy thereof is attached.

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

   1. From: _____ To: _____

      The document was recorded in the United States Patent and Trademark Office at

      Reel _____, Frame _____, or for which a copy thereof is attached.

   2. From: _____ To: _____

      The document was recorded in the United States Patent and Trademark Office at

      Reel _____, Frame _____, or for which a copy thereof is attached.

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

4. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Signature	Date: 4/12/17
Michael J. Marcin, Esq.	48,198
Printed or Typed Name	Title or Registration Number

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30139/00103
	Application Number	15/042,993
Title of Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Clarke	W.	McAllister	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	EUGENE	State/Province	OR	Country of Residence	US

Mailing Address of Inventor:

Address 1	4060 SUNRIDGE DRIVE		
Address 2			
City	EUGENE	State/Province	OR
Postal Code	97405	Country	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	30636		
Email Address		Add Email	Remove Email

Application Information:

Title of the Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors		
Attorney Docket Number	30139/00103	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	19	Suggested Figure for Publication (if any)	

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30139/00103
	Application Number	15/042,993
Title of Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	30636		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of	13526520	2012-06-19

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30139/00103
	Application Number	15/042,993
Title of Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors	

Prior Application Status	Patented			Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13526520	Continuation in part of	12820109	2010-06-21	8228198	2012-07-24
Prior Application Status	Patented			Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12820109	Continuation in part of	11465712	2006-08-18	7830258	2010-11-09
Prior Application Status	Expired		Remove		
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
11465712	Claims benefit of provisional	60709713	2005-08-19		
Prior Application Status	Abandoned		Remove		
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
12820109	Continuation in part of	12124768	2008-05-21		
Prior Application Status	Expired		Remove		
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)		
12124768	Claims benefit of provisional	60939603	2007-05-22		

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove			
Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30139/00103
	Application Number	15/042,993
Title of Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors	

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30139/00103
	Application Number	15/042,993
Title of Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30139/00103
	Application Number	15/042,993
Title of Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

◯ Assignee	◯ Legal Representative under 35 U.S.C. 117	◯ Joint Inventor
◯ Person to whom the inventor is obligated to assign.	◯ Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	ADASA INC.		
Mailing Address Information For Applicant:			
Address 1	4060 Sunridge Drive		
Address 2			
City	Eugene	**State/Province**	OR
Country	US	Postal Code	97405
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button.

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30139/00103
	Application Number	15/042,993
Title of Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors	

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature				Date (YYYY-MM-DD)	2017-04-12
First Name	MICHAEL J.	Last Name	MARCIN	Registration Number	48198

Additional Signature may be generated within this form by selecting the Add button.

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	30139/00103
	Application Number	15/042,993
Title of Invention	Systems, Methods, And Devices For Commissioning Wireless Sensors	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Electronic Acknowledgement Receipt

EFS ID:	28909276
Application Number:	15042993
International Application Number:	
Confirmation Number:	7577
Title of Invention:	Systems, Methods, And Devices For Commissioning Wireless Sensors
First Named Inventor/Applicant Name:	Clarke W. McAllister
Customer Number:	30636
Filer:	Oleg F. Kaplun/sandy gellineau
Filer Authorized By:	Oleg F. Kaplun
Attorney Docket Number:	30139/00103
Receipt Date:	12-APR-2017
Filing Date:	12-FEB-2016
Time Stamp:	16:38:02
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		00103ResponsePOA12April17.pdf	3559342 c39d7f93368ff9d015e7d571094dee2fee455a5b	yes	22

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	1
	Miscellaneous Incoming Letter	2	4
	Request for Corrected Filing Receipt	5	9
	Power of Attorney	10	10
	Assignee showing of ownership per 37 CFR 3.73	11	14
	Application Data Sheet	15	22
Warnings:			
Information:			
	Total Files Size (in bytes):	3559342	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Attorney Docket No.30139/00103

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s)	:	Adasa Inc.
Inventor(s)	:	McAllister
Serial No.	:	15/042,993
Filed	:	February 12, 2016
For	:	Systems, Methods, and Devices for Commissioning Wireless Sensors
Group Art Unit	:	7577
Confirmation No	:	2685
Examiner	:	Thomas J. Mullen

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Certificate of Fax / Electronic Filing

I hereby certify that this correspondence is being deposited via facsimile, electronically or with U.S. Postal Services as first class mail in an envelope addressed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
571-273-8300

By: _____ Date: April 12, 2017
Michael J. Marcin (Reg. No. 48,198)

TRANSMITTAL

Transmitted herewith please find a Response to the Notice mailed on March 29, 2017 and a Request for a Corrected Filing Receipt for filing in the above-identified application. No fees are believed to be required. However, the Commissioner is hereby authorized to charge the **Deposit Account of Fay Kaplun & Marcin, LLP No. 50-1492** for any additional required fees.

Respectfully Submitted,

Dated: 4/12/2017

By: _____
Michael J. Marcin (Reg. No. 48,198)
Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, NY 10038
(212) 619-6000 (phone)
(212) 619-0276 (fax)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s)	:	Adasa Inc.
Inventor(s)	:	McAllister
Serial No.	:	15/042,993
Filed	:	February 12, 2016
For	:	Systems, Methods, and Devices for Commissioning Wireless Sensors
Group Art Unit	:	7577
Confirmation No	:	2685
Examiner	:	Thomas J. Mullen

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE

In response to a Notice mailed on March 29, 2017, enclosed please find an executed Power of Attorney and a Statement under 37 CFR 3.73(c) along with an Application Data Sheet for filing in the above-identified application. A copy of the Notice is also enclosed herewith.

Respectfully Submitted,

Dated: 4/12/2017

By: _____
Michael J. Marcin (Reg. No. 48,198)

Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, NY 10038
(212) 619-6000 (phone)
(212) 619-0276 (fax)

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103

CONFIRMATION NO. 7577

30636
FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

IMPROPER CFR REQUEST



Date Mailed: 03/29/2017

RESPONSE TO REQUEST FOR CORRECTED FILING RECEIPT

Power of Attorney, Claims, Fees, System Limitations, and Miscellaneous

In response to your request for a corrected Filing Receipt, the Office is unable to comply with your request because:

- Any request to correct or update the name of the applicant must include an application data sheet (ADS) in compliance with 37 CFR 1.76 specifying the correct or updated name of the applicant in the applicant information section. Any request to change the applicant after an original applicant has been specified under 37 CFR 1.46(b) must include a new ADS in compliance with 37 CFR 1.76 specifying the applicant in the applicant information section and comply with 37 CFR 3.71 and 3.73. See 37 CFR 1.46(c).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/afessehaye/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103

CONFIRMATION NO. 7577
IMPROPER CPOA LETTER

30636
FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

OC000000090274566

Date Mailed: 03/29/2017

NOTICE REGARDING POWER OF ATTORNEY

This is in response to the power of attorney filed 03/23/2017. The power of attorney in this application is not accepted for the reason(s) listed below:

- The power of attorney has not been accepted because the party who is giving power has not been identified. Power of attorney may only be signed by the applicant for patent (37 CFR 1.42) or the patent owner. A party who is not the applicant must become the applicant in accordance with 37 CFR 1.46(c) and appoint any power of attorney in compliance with 37 CFR 3.71 and 3.73. For a reissue application, reexamination proceeding, or supplemental examination proceeding, a patent owner who was not the applicant under 37 CFR 1.46 must appoint any power of attorney in compliance with 37 CFR 3.71 and 3.73. See 37 CFR 1.32(b)(4).

/afessehaye/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103

CONFIRMATION NO. 7577

POA ACCEPTANCE LETTER

30636
FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

OC000000090625633

Date Mailed: 04/13/2017

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 04/12/2017.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/rmohamed/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
15/042,993	02/12/2016	2685	1600	30139/00103	20	3

CONFIRMATION NO. 7577

CORRECTED FILING RECEIPT

30636
FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

OC000000090623691

Date Mailed: 04/13/2017

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Clarke W. McAllister, EUGENE, OR;

Applicant(s)

ADASA INC., Eugene, OR;

Power of Attorney: The patent practitioners associated with Customer Number 30636

Domestic Priority data as claimed by applicant

This application is a CON of 13/526,520 06/19/2012 PAT 9272805
which is a CIP of 12/820,109 06/21/2010 PAT 8228198 *
which is a CIP of 11/465,712 08/18/2006 PAT 7830258
which claims benefit of 60/709,713 08/19/2005
and said 12/820,109 06/21/2010
is a CIP of 12/124,768 05/21/2008 ABN
which claims benefit of 60/939,603 05/22/2007
(*)Data provided by applicant is not consistent with PTO records.

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 02/29/2016

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/042,993**

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

Title

Systems, Methods, And Devices For Commissioning Wireless Sensors

Preliminary Class

340

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

SML Exhibit 1003 - Page 209

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103	7577

30636 7590 04/19/2017
FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

EXAMINER	
MULLEN, THOMAS J	

ART UNIT	PAPER NUMBER
2685	

MAIL DATE	DELIVERY MODE
04/19/2017	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of Non-Compliant Amendment (37 CFR 1.121)	Application No.	Applicant(s)
	15/042,993	MCALLISTER, CLARKE W.
	Examiner	Art Unit
	THOMAS MULLEN	2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

The amendment document filed on *23 March 2017* is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☒ 1. Amendments to the specification:
  - ☐ A. Amended paragraph(s) do not include markings.
  - ☐ B. New paragraph(s) should not be underlined.
  - ☒ C. Other *See Continuation Sheet*.
- ☐ 2. Abstract:
  - ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
  - ☐ B. Other _____.
- ☐ 3. Amendments to the drawings:
  - ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
  - ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
  - ☐ C. Other _____.
- ☐ 4. Amendments to the claims:
  - ☐ A. A complete listing of all of the claims is not present.
  - ☐ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
  - ☐ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
  - ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
  - ☐ E. Other: _____.
- ☒ 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4):
  See Continuation Sheet

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment or an amendment filed after allowance. If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.

2. Applicant is given **two months** from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a *Quayle* action. If any of above boxes 1. to 4. are checked, the correction required is only the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121.

   Extensions of time are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action.

   Failure to timely respond to this notice will result in:
   Abandonment of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or
   Non-entry of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

571-272-2965	/Thomas Mullen/ Primary Examiner, AU 2685

Continuation of 1(c) Other: the inserting of a "Rel. App's." heading/paragraph ("following the Title on page 1") conflicts with (i) the already-present heading/paragraph, on p. 1 of the specification as filed, and (ii) the presence of the inventor name between the Title and the Rel. App's. heading/paragraph on p. 1 as filed (i.e., it is unclear if the new heading/paragraph is intended to come before the inventor name, or after).

Continuation of 5 Other: regarding the papers submitted 4/12/17 (POA, ADS, 3.73(b) statement, etc.), the terminal disclaimer needs to be resubmitted in order to be reconsidered--i.e., note the requirements set forth in the adverse TD review decision dated 3/23/17.

PTO/SB/26 (01-08)
Approved for use through 03/31/2008. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT	Docket Number (Optional) 30139/00103

In re Application of: McAllister

Application No.: 15/042,993

Filed: February 12, 2016

For: Systems, Methods, and Devices for Commissioning Wireless Sensors

The owner*, ADASA INC., of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term **prior patent** No. 9,272,805 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said **prior patent** is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

expires for failure to pay a maintenance fee;
is held unenforceable;
is found invalid by a court of competent jurisdiction;
is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
has all claims canceled by a reexamination certificate;
is reissued; or
is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. ☑ The undersigned is an attorney or agent of record. Reg. No. 48,198



Signature

4/28/17
Date

Michael J. Marcin
Typed or printed name

212-619-6000
Telephone Number

☑ Terminal disclaimer fee under 37 CFR 1.20(d) included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	29060027
Application Number:	15042993
International Application Number:	
Confirmation Number:	7577
Title of Invention:	Systems, Methods, And Devices For Commissioning Wireless Sensors
First Named Inventor/Applicant Name:	Clarke W. McAllister
Customer Number:	30636
Filer:	Oleg F. Kaplun/sandy gellineau
Filer Authorized By:	Oleg F. Kaplun
Attorney Docket Number:	30139/00103
Receipt Date:	28-APR-2017
Filing Date:	12-FEB-2016
Time Stamp:	12:09:06
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		00103April272017.pdf	687581 914c3a58c038621fea66d8b5b72f92dab40ef76f	yes	5

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	1
	Amendment/Req. Reconsideration-After Non-Final Reject	2	4
	Terminal Disclaimer Filed	5	5
Warnings:			
Information:			
	Total Files Size (in bytes):	687581	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Attorney Docket No.30139/00103

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s)	:	Adasa Inc.
Inventor(s)	:	McAllister
Serial No.	:	15/042,993
Filed	:	February 12, 2016
For	:	Systems, Methods, and Devices for Commissioning Wireless Sensors
Group Art Unit	:	7577
Confirmation No	:	2685
Examiner	:	Thomas J. Mullen

Certificate of Facsimile / Electronic Filing
I hereby certify that this correspondence is being deposited via facsimile or Electronic Filing addressed to:

Mail Stop: Amendments
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
571-273-8300

By: :_____ Date: April 28, 2017
Michael J. Marcin (Reg. No. 48,198)

Mail Stop: Amendments
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL

In response to the Notification of Non-Compliant Amendment (37 CFR 1.121) mailed on April 19, 2017 transmitted herewith please find a revised Amendment along with one (1) Terminal Disclaimer for filing in the above-identified application. Applicant hereby requests to disregard the previously filed Terminal Disclaimer which was filed on March 23, 2017. The required fees have been paid on March 23, 2017. However, the Commissioner is hereby authorized to charge the Deposit Account of **Fay Kaplun & Marcin, LLP No. 50-1492** any additional required fees.

Respectfully submitted,

Dated: April 28, 2017

By:_____
Michael J. Marcin (Reg. No. 48,198)
Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, NY 10038
Tel: (212) 619-6000/Fax: (212) 619-0276

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	McAllister
Serial No.	:	15/042,993
Filed	:	February 12, 2016
For	:	Systems, Methods, And Devices For Commissioning Wireless Sensors
Group Art Unit	:	2685
Confirmation No.	:	7577
Examiner	:	Thomas J Mullen

Mail Stop: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT

In response to the Notice of Non-Compliant Amendment mailed April 19, 2017 in the above-referenced application, please enter the following amendments and consider the following remarks.

SML Exhibit 1003 - Page 217

IN THE SPECIFICATION

Please replace the paragraph starting at p. 1 ln. 4 of the Specification with the following:

~~The present application is a continuation-in-part application based on U.S. Patent Application Number 12/820,109 filed on 21 June 2010, which claims benefit claims benefit under 35 USC Section 119(e) which is a continuation-in-part application based on U.S. Patent Application Number 11/465,712 (US 7830258) filed on 18 August 2006, which claims benefit under 35 USC Section 119(e) of U.S. Patent Application number 60/709,713 filed on 19 August 2005, and a continuation-in-part of U.S. Pat. App. No. 12/124,768 (abandoned) filed on 21 May 2008, which claims benefit claims benefit under 35 USC Section 119(e) of U.S. Provisional Patent App. No. 60/939,603 filed on 22 May 2007, all by the same inventor Clarke W. McAllister. The present application is based on and claims priority from these applications, the disclosures of which are hereby expressly incorporated herein by reference.~~

The present application is a continuation application based on U.S. Application Ser. No. 13/526,520, filed on June 19, 2012, now U.S. Pat. No. 9,272,805, which is a continuation-in-part application based on U.S. Application Ser. No. 12/820,109, filed on June 21, 2010, now U.S. Pat. No. 8,228,198, which is a continuation-in-part application of U.S. Application Ser. No. 11/465,712, filed on August 18, 2006, now U.S. Pat. No. 7,830,258, which claims the benefit of U.S. Provisional Application No. 60/709,713 filed on August 19, 2005, and a continuation-in-part application of U.S. Application Ser. No. 12,124,768, filed on May 21, 2008, now abandoned, which claims the benefit of U.S. Provisional Application No. 60,939,603 filed on May 22, 2007. The present application claims priority from these applications, the disclosures of which are hereby expressly incorporated herein by reference.

REMARKS

No new matter has been added. Claims 17-36 are pending in the present application. Applicant thanks the Examiner for indicating that claims 17-36 contain allowable subject matter. In view of the following remarks, Applicant respectfully submits that all presently pending claims are in condition for allowance.

The Non-Compliant Amendment has been corrected, and the amended Related Applications paragraph submitted herein is intended to replace the originally filed Related Applications paragraph.

Claims 17-36 stand provisionally rejected under the ground of non-statutory double patenting over claims 1-20 of U.S. Patent No. 9,272,805. (*See* 02/14/2017 Office Action, p. 3.) Applicant has resubmitted the Terminal Disclaimer with this Amendment. Therefore, the withdrawal of the non-statutory Double Patenting rejections is respectfully requested.

In view of the foregoing, it is respectfully submitted that all of the currently pending claims are in condition for allowance. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

Dated: April 28, 2017

By: /Michael J. Marcin/
Michael Marcin (Reg. No. 48,198)

Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, NY 10038
Phone: 212-619-6000
Fax: 212-619-0276

SML Exhibit 1003 - Page 219

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	15/042,993	MCALLISTER, CLARKE W.	

Document Code - DISQ	Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed : 4/28/17	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:
jean proctor

U.S. Patent and Trademark Office

UNITED STATES PATENT AND TRADEMARK OFFICE

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NOTICE OF ALLOWANCE AND FEE(S) DUE

30636 7590 06/07/2017

FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

EXAMINER
MULLEN, THOMAS J

ART UNIT	PAPER NUMBER
2685	

DATE MAILED: 06/07/2017

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103	7577

TITLE OF INVENTION: Systems, Methods, And Devices For Commissioning Wireless Sensors

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	09/07/2017

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

30636 7590 06/07/2017
FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103	7577

TITLE OF INVENTION: Systems, Methods, And Devices For Commissioning Wireless Sensors

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	09/07/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
MULLEN, THOMAS J	2685	340-010510

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ❑ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ❑ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

SML Exhibit 1003 - Page 222

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103	7577

30636 7590 06/07/2017

FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

EXAMINER	
MULLEN, THOMAS J	

ART UNIT	PAPER NUMBER
2685	

DATE MAILED: 06/07/2017

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 15/042,993	Applicant(s) MCALLISTER, CLARKE W.	
	Examiner THOMAS MULLEN	Art Unit 2685	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the amendment and term.discl. filed 4/28/17*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *17-36*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☒ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/Thomas Mullen/
Primary Examiner, AU 2685
571-272-2965

1. The following is an examiner's statement of reasons for allowance:

see the prosecution history of parent application 13/526,520; the present claims only slightly differ from the allowed claims of the '520 application (lacking the recitation of a party which "designate(s)" the "allocated block" and/or the "limited number of most significant bits" of the unique serial number space, as recited at the end of claims 17, 30 and 32 in the '520 application), and therefore are considered allowable for the same reason(s) as the '520 claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Mullen whose telephone number is (571)272-2965. The examiner can normally be reached on Mon.-Fri. (alternate Fridays) from 7:30 to 4:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hai Phan, can be reached on 571-272-6338. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://portal.uspto.gov/external/portal. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Thomas J. Mullen/
Primary Examiner
Art Unit 2685

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	117	(allocat$3 apportion$3 assign$4 send$3 sent receive received receives receiving download$3 upload$3) near5 (((block$1 cluster$1 group$1 range$1 list$1 set$1 sub$1set$1) near2 ((serial identif$7) adj (number$1 code codes))) near10 (tag$1 transponder$1))	US-PGPUB; USPAT	OR	OFF	2017/05/12 12:27
L2	4553	G06K2017/0045,0051.cpc. G06K19/077,07716.cpc. B65C9/1865.cpc. B65C11/006.cpc.	US-PGPUB; USPAT	OR	OFF	2017/05/12 12:27
L3	42983	((340/572.1-572.9,10.1-10.6) or (709/217) or (705/28)).CCLS.	US-PGPUB; USPAT	OR	OFF	2017/05/12 12:27
L4	50	L1 and (L2 L3)	US-PGPUB; USPAT	OR	OFF	2017/05/12 12:27
L5	37173	((serial identif$7) adj (number$1 code codes)) near3 (block$1 set$1 subset$1 cluster$1 group$1 range$1 list$1)	US-PGPUB; USPAT	OR	OFF	2017/05/12 12:28
L6	171	L5 same ((writ$3 encod$3 program$5) near2 ((wireless rf "radio frequency" rf$1id) adj (tag$1 transponder$1)))	US-PGPUB; USPAT	OR	OFF	2017/05/12 12:28
L7	42	L6 and (2 3)	US-PGPUB; USPAT	OR	OFF	2017/05/12 12:28
L8	294	((unique serial) adj2 number$1) same (block$1 near5 bits)	US-PGPUB; USPAT	OR	OFF	2017/05/12 12:29
L9	21	L8 and (2 3)	US-PGPUB; USPAT	OR	OFF	2017/05/12 12:29

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L10	2496	G06K19/077,07716.cpc. B65C9/1865.cpc. B65C11/006.cpc.	US-PGPUB; USPAT	OR	OFF	2017/05/12 12:29
L11	5753	(((serial identif$7) adj (number$1 code codes)) near3 (block$1 set$1 subset$1 cluster$1 group$1 range$1 list$1)).clm.	US-PGPUB; USPAT	OR	OFF	2017/05/12 12:30
L12	7	11 same ((writ$3 encod$3 program$5) near2 ((wireless rf "radio frequency" rf$1id) adj (tag$1 transponder$1))).clm.	US-PGPUB; USPAT	OR	OFF	2017/05/12 12:30
L13	21	((allocat$3 apportion$3 assign$4 send$3 sent receive received receives receiving download$3 upload$3) near5 (((block$1 cluster$1 group$1	US-PGPUB; USPAT	OR	OFF	2017/05/12 12:31

		range$1 list$1 set$1 sub$1set$1) near2 ((serial identif$7) adj (number$1 code codes))) near10 (tag$1 transponder$1))).clm.				
L14	12	(((unique serial) adj2 number$1) same (block$1 near5 bits)).clm.	US-PGPUB; USPAT	OR	OFF	2017/05/12 12:31
L15	4	10 and (12 13 14)	US-PGPUB; USPAT	OR	OFF	2017/05/12 12:32

5/ 12/ 2017 12:32:54 PM
C:\ Users\ tmullen\ Documents\ EAST\ Workspaces\ 15042993.wsp

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15042993	MCALLISTER, CLARKE W.
	Examiner	**Art Unit**
	THOMAS MULLEN	2685

CPC						
Symbol					**Type**	**Version**
G06K		19	/	07716	F	2013-01-01
B65C		9	/	1865	I	2013-01-01
B65C		11	/	006	I	2013-01-01
B65C		2009	/	0003	A	2013-01-01
B65C		2009	/	404	A	2013-01-01
G06K		19	/	077	I	2013-01-01
G06K		2017	/	0041	A	2013-01-01
			/			
			/			
			/			
			/			
			/			
			/			
			/			
			/			

CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
			/					
			/					

NONE (Assistant Examiner) (Date)	**Total Claims Allowed:** 20	
/THOMAS MULLEN/ Primary Examiner.Art Unit 2685 (Primary Examiner) (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 15

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15042993	MCALLISTER, CLARKE W.
	Examiner	**Art Unit**
	THOMAS MULLEN	2685

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
340	10.51	H	0	4	Q	5 / 22 (2006.01.01)						

CROSS REFERENCE(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				

NONE	Total Claims Allowed:	
(Assistant Examiner) (Date)	20	
/THOMAS MULLEN/ Primary Examiner.Art Unit 2685	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner) (Date)	1	15

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15042993	MCALLISTER, CLARKE W.
	Examiner	**Art Unit**
	THOMAS MULLEN	2685

☒ **Claims renumbered in the same order as presented by applicant** ☐ **CPA** ☐ **T.D.** ☐ **R.1.47**

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		17		33										
	2		18		34										
	3		19		35										
	4		20		36										
	5		21												
	6		22												
	7		23												
	8		24												
	9		25												
	10		26												
	11		27												
	12		28												
	13		29												
	14		30												
	15		31												
	16		32												

NONE (Assistant Examiner) (Date)	**Total Claims Allowed:** 20
/THOMAS MULLEN/ Primary Examiner.Art Unit 2685 (Primary Examiner) (Date)	O.G. Print Claim(s): 1 O.G. Print Figure: 15

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15042993	MCALLISTER, CLARKE W.
	Examiner	Art Unit
	THOMAS MULLEN	2685

CPC- SEARCHED		
Symbol	Date	Examiner
G06K 2017/0045,0051; 19/077,07716	2/9/17	TM
B65C 9/1865, 11/006	2/9/17	TM
UPDATE	5/12/17	TM

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
340	572.1-572.9,10.1-10.6	2/9/17	TM
709	217	2/9/17	TM
705	28	2/9/17	TM
UPDATE		5/12/17	TM

SEARCH NOTES		
Search Notes	Date	Examiner
EAST (text-limited CPC & USPC classes/subs, see scanned search history)	2/9/17	TM
EAST (text-limited CPC & USPC classes/subs, see scanned search history)	5/12/17	TM

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
G06K	19/077,07716	5/12/17	TM
B65C	9/1865, 11/006	5/12/17	TM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	McAllister
Serial No.	:	15/042,993
Filed	:	February 12, 2016
For	:	Systems, Methods, And Devices For Commissioning Wireless Sensors
Group Art Unit	:	2685
Confirmation No.	:	7577
Examiner	:	Thomas J Mullen

Mail Stop: 312 Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RULE 312 AMENDMENT

In response to the Notice of Allowance mailed on June 7, 2017 the Applicant respectfully requests entry of the following amendment.

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IN THE CLAIMS

1-16. (Cancelled)

17. (Currently Amended) An RFID transponder comprising:

a substrate;

an antenna structure formed on the substrate; and

an RFID integrated circuit chip which is electrically coupled to the antenna structure,

wherein the RFID integrated circuit chip is encoded with a unique object number, the unique object number comprising an object class information space and a unique serial number space, [[and]]

wherein the unique serial number space is encoded with one instance from an allocated block,

wherein the unique serial number space has ~~an allocated block stored therein defined by~~ a limited number of most significant bits stored therein that are defined by a limited number of most significant bits from the allocated block, ~~of the unique serial number space~~ and,

wherein the remaining bits of lesser significance of the unique serial number space are encoded to create a unique serial number.

18. (Cancelled)

19. (Previously Presented) The RFID transponder of claim 17, wherein the object class information space is encoded with information comprising a company prefix, an item reference, a partition value, and a filter value.

20. (Previously Presented) The RFID transponder of claim 17, wherein the unique object number is a portion of a serialized global trade item number.

SML Exhibit 1003 - Page 234

21. (Previously Presented) The RFID transponder of claim 20, wherein the serialized global trade item number is an EPC SGTIN-96 encoding.

22. (Previously Presented) The RFID transponder of claim 17, wherein the unique serial number space is at least 38 bits.

23. (Previously Presented) The RFID transponder of claim 17, wherein the allocated block is defined by at least 3 most significant bits.

24. (Cancelled)

25. (Previously Presented) The RFID transponder of claim 17, wherein the allocated block is one of a plurality of allocations intermittently received by an encoder.

26. (Previously Presented) The RFID transponder of claim 17, wherein the RFID integrated circuit chip is comprised of silicon.

27. (Previously Presented) The RFID transponder of claim 17, wherein the RFID integrated circuit chip is comprised of polymer.

28. (Previously Presented) The RFID transponder of claim 17, wherein the substrate, antenna structure, and RFID integrated circuit chip are covered by a face stock material.

29. (Previously Presented) The RFID transponder of claim 17, wherein the RFID integrated circuit chip is disposed on the substrate.

30. (Currently Amended) A RFID transponder comprising:

a substrate;

an antenna structure formed on the substrate; and

an RFID integrated circuit chip which is electrically coupled to the antenna structure,

SML Exhibit 1003 - Page 235

wherein the RFID integrated circuit chip is encoded with a global trade item number including a unique object number, the unique object number comprising an object class information space including a block of at least 50 bits and a unique serial number space including a block of at least 38 bits, and

wherein the unique serial number space has ~~at least~~ one instance of an allocated block stored therein, wherein ~~defined by~~ at least 3 most significant bits of the unique serial number space are defined by at least 3 most significant bits from the allocated block.

31. (Previously Presented) The RFID transponder of claim 30, wherein remaining bits of lesser significance of the unique serial number space are encoded with a unique serial number for the object class.

32. (Currently Amended) An integrated circuit, comprising:

a radio frequency circuit configured to backscatter a return link signal for processing by an RFID interrogator;

control logic; and

a memory,

wherein the memory is configured with a unique object number space, the unique object number space comprising an object class information space and a unique serial number space, [[and]]

wherein the unique serial number space is encoded with one instance from an allocated block,

wherein the unique serial number space ~~is encoded with an allocated block defined by~~ has a limited number of most significant bits ~~of the unique serial number space bits~~ stored therein that are defined by a limited number of most significant bits from the allocated block, and

wherein the remaining bits of lesser significance of the unique serial number space are encoded to create a unique serial number.

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33. (Cancelled)

34. (Previously Presented) The integrated circuit of claim 32, wherein the object class information space is encoded with information comprising a company prefix, an item reference, a partition value, and a filter value.

35. (Previously Presented) The integrated circuit of claim 32, wherein the unique object number is a portion of a serialized global trade item number.

36. (Previously Presented) The integrated circuit of claim 35, wherein the serialized global trade item number is an EPC SGTIN-96 encoding.

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REMARKS

Claims 18, 24 and 33 have been cancelled. Claims 17, 30 and 32 have been amended to more accurately recite the claimed subject matter. No new matter has been added.

The Applicant respectfully requests that the amendment be entered because it merely corrects the claims to more accurately recite the claimed subject matter without substantially changing the scope of the claims and does not require any further search or consideration.

Respectfully submitted,

Dated: June 26, 2017

By: /Michael J. Marcin/
Michael Marcin (Reg. No. 48,198)

Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, NY 10038
Phone: 212-619-6000
Fax: 212-619-0276

SML Exhibit 1003 - Page 238

Attorney Docket No.30139/00103

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	McAllister
Serial No.	:	15/042,993
Filed	:	February 12, 2016
For	:	Systems, Methods, And Devices For Commissioning Wireless Sensors
Group Art Unit	:	2685
Confirmation No.	:	7577
Examiner	:	Thomas J Mullen

Mail Stop: 312 Amendments
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

1. In accordance with the duty of disclosure under 37 C.F.R. § 1.56 and in conformance with the procedures of 37 C.F.R. §§ 1.97 and 1.98 and M.P.E.P. § 609, attorneys for Applicant hereby bring the following two (2) references to the attention of the Examiner. The references are listed on the attached modified PTO 1449 form. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

2. A copy of each Non-U.S. Patent or Non-U.S. Patent Publication listed on the Form PTO-1449, if any, is enclosed.

3. By submitting this Information Disclosure Statement, Applicant makes no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

4. By submitting this Information Disclosure Statement, Applicant makes no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

5. By submitting this Information Disclosure Statement, Applicant makes no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Respectfully submitted,

Dated: June 26, 2017

By: _____

Michael J. Marcin (Reg. No. 48,198)
Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, NY 10038
Tel: (212) 619-6000
Fax: (212) 619-0276

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449	ATTY. DOCKET NO. 30139/00103	SERIAL NO. 15/042,993
	APPLICANT(S) McAllister	
	FILING DATE February 12, 2016	

U. S. PATENT DOCUMENTS

EXAMINER INITIAL	PATENT / PUBLICATION NUMBER	PATENT / PUBLICATION DATE	NAME	CLASS	SUBCLASS	FILING DATE*

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE (M/D/Y)	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

OTHER DOCUMENTS

EXAMINER INITIAL		AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
		EPCTM Tag Data Standards Version 1.1 Rev.1.23, Last Call Working Draft on 16 February 2004, pp. 11, 19-25
		RFID for Dummies, 5 pps., 2005

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Electronic Patent Application Fee Transmittal

Application Number:	15042993
Filing Date:	12-Feb-2016
Title of Invention:	Systems, Methods, And Devices For Commissioning Wireless Sensors
First Named Inventor/Applicant Name:	Clarke W. McAllister
Filer:	Oleg F. Kaplun/sandy gellineau
Attorney Docket Number:	30139/00103

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt

EFS ID:	29612215
Application Number:	15042993
International Application Number:	
Confirmation Number:	7577
Title of Invention:	Systems, Methods, And Devices For Commissioning Wireless Sensors
First Named Inventor/Applicant Name:	Clarke W. McAllister
Customer Number:	30636
Filer:	Oleg F. Kaplun/sandy gellineau
Filer Authorized By:	Oleg F. Kaplun
Attorney Docket Number:	30139/00103
Receipt Date:	26-JUN-2017
Filing Date:	12-FEB-2016
Time Stamp:	18:25:53
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$180
RAM confirmation Number	062717INTEFSW18264700
Deposit Account	501492
Authorized User	sandy gellineau

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		00103Amdt312andIDS26June17.pdf	5954188 cef0bf96476ef1b14cfd197d470c0e625a1c8e89	yes	24

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	1
	Amendment after Notice of Allowance (Rule 312)	2	7
	Information Disclosure Statement (IDS) Form (SB08)	8	10
	Non Patent Literature	11	19
	Non Patent Literature	20	24

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30435 cdec1c6fbf993499dab48b7e1aeb1a7ca9833104	no	2

Warnings:

Information:

Total Files Size (in bytes):	5984623

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Attorney Docket No.30139/00103

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	McAllister
Serial No.	:	15/042,993
Filed	:	February 12, 2016
For	:	Systems, Methods, And Devices For Commissioning Wireless Sensors
Group Art Unit	:	2685
Confirmation No.	:	7577
Examiner	:	Thomas J Mullen

Certificate of Facsimile / Electronic Filing
I hereby certify that this correspondence is being deposited via facsimile or Electronic Filing addressed to:

Mail Stop: 312 Amendments
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
571-273-8300

By: _____ Date: June 26, 2017
Michael J. Marcin (Reg. No. 48,198)

Mail Stop: 312 Amendments
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL

Transmitted herewith please find a 312 Amendment along with an Information Disclosure Statement ("IDS"), a PTO-1449 form and two (2) references for filing in the above-identified application. Please charge the Credit Card of Fay Kaplun & Marcin in the amount of $180.00 for the filing fees. The Commissioner is hereby authorized to charge the **Deposit Account of Fay Kaplun & Marcin, LLP No. 50-1492** for any additional fees.

Respectfully submitted,

Dated: June 26, 2017

By: _____

Michael J. Marcin (Reg. No. 48,198)
Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, NY 10038
Tel: (212)619-6000
Fax: (212) 619-0276

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103	7577

7590 07/14/2017

FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

EXAMINER	
MULLEN, THOMAS J	

ART UNIT	PAPER NUMBER
2685	

MAIL DATE	DELIVERY MODE
07/14/2017	PAPER

NOTICE OF NON-COMPLIANT INFORMATION DISCLOSURE STATEMENT

An Information Disclosure Statement (IDS) filed 6/26/2017 in the above-identified application fails to meet the requirements of 37 CFR 1.97(d) for the reason(s) specified below. Accordingly, the IDS will be placed in the file, but the information referred to therein has not been considered.

The IDS is not compliant with 37 CFR 1.97(d) because:

☒ The IDS lacks a statement as specified in 37 CFR 1.97(e).

☐ The IDS lacks the fee set forth in 37 CFR 1.17(p).

☐ The IDS was filed after the issue fee was paid. Applicant may wish to consider filing a petition to withdraw the application from issue under 37 CFR 1.313(c) to have the IDS considered. See MPEP 1308.

571-272-4200 or 1-888-786-0101
Application Assistance Unit
Office of Data Management

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103	7577

30636 7590 07/18/2017
FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

EXAMINER	
MULLEN, THOMAS J	

ART UNIT	PAPER NUMBER
2685	

MAIL DATE	DELIVERY MODE
07/18/2017	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Response to Rule 312 Communication	Application No.	Applicant(s)
	15/042,993	MCALLISTER, CLARKE W.
	Examiner	Art Unit
	THOMAS MULLEN	2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

1. ☒ The amendment filed on *26 June 2017* under 37 CFR 1.312 has been considered, and has been:

a) ☐ entered.

b) ☐ entered as directed to matters of form not affecting the scope of the invention.

c) ☐ disapproved because the amendment was filed after the payment of the issue fee.

Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.

d) ☒ disapproved. See explanation below.

e) ☐ entered in part. See explanation below.

Indep. claims 17 and 32 are improperly broadened after allowance, from reciting that the unique serial number space "has an allocated block stored therein" (claim 17) or "is encoded with an allocated block" (claim 32) to being "encoded with one instance from an allocated block"; further, it is unclear what is meant by "one instance from an allocated block", per se (i.e., (1) instance of what? and, (2) the scope of "allocated block" is unclear--note in the allowed version of these claims, "an allocated block defined by..."). Further as to claims 17 and 32, it is unclear if the "limited number of...bits" from the allocated block correspond to the "encoded...one instance" from the allocated block--i.e., it is unclear if these are the same or different "bits" (or instances of the "block"), per se. (In addition, it is noted that a proposed claim 17 presented to the Examiner for consideration on 6/22/17, as a potential amendment under Rule 312, contained limitations which are not found in the version of claim 17 actually submitted on 6/26/17--note the last, and third-to-last, lines of the proposed claim 17.) Similarly in indep. claim 30, "one instance of an allocated block" improperly broadens the claim and is unclear.

/Thomas Mullen/
Primary Examiner, AU 2685
571-272-2965

Attorney Docket No.30139/00103

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	McAllister
Serial No.	:	15/042,993
Filed	:	February 12, 2016
For	:	Systems, Methods, And Devices For Commissioning Wireless Sensors
Group Art Unit	:	2685
Confirmation No.	:	7577
Examiner	:	Thomas J Mullen

Mail Stop: 312 Amendments
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

1. In accordance with the duty of disclosure under 37 C.F.R. § 1.56 and in conformance with the procedures of 37 C.F.R. §§ 1.97 and 1.98 and M.P.E.P. § 609, attorneys for Applicant hereby bring the following two (2) references to the attention of the Examiner. The references are listed on the attached modified PTO 1449 form. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom. Applicant hereby states that to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in § 1.56(c) more than three months prior to the filing of the

information disclosure statement. In particular, Applicant first learned of the references on May 22, 2017.

2. A copy of each Non-U.S. Patent or Non-U.S. Patent Publication listed on the Form PTO-1449, if any, is enclosed.

3. By submitting this Information Disclosure Statement, Applicant makes no representation that a search has been performed, of the extent of any search performed, or that more relevant information does not exist.

4. By submitting this Information Disclosure Statement, Applicant makes no representation that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

5. By submitting this Information Disclosure Statement, Applicant makes no representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

Respectfully submitted,

Dated: July 19, 2017

By: _____

Michael J. Marcin (Reg. No. 48,198)
Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, NY 10038
Tel: (212) 619-6000
Fax: (212) 619-0276

SML Exhibit 1003 - Page 252

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449	ATTY. DOCKET NO. 30139/00103	SERIAL NO. 15/042,993
	APPLICANT(S) McAllister	
	FILING DATE February 12, 2016	

U. S. PATENT DOCUMENTS

EXAMINER INITIAL	PATENT / PUBLICATION NUMBER	PATENT / PUBLICATION DATE	NAME	CLASS	SUBCLASS	FILING DATE*

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE (M/D/Y)	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

OTHER DOCUMENTS

EXAMINER INITIAL		AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
		EPCTM Tag Data Standards Version 1.1 Rev.1.23, Last Call Working Draft on 16 February 2004, pp. 11, 19-25
		RFID for Dummies, 5 pps., 2005

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Electronic Patent Application Fee Transmittal

Application Number:	15042993
Filing Date:	12-Feb-2016
Title of Invention:	Systems, Methods, And Devices For Commissioning Wireless Sensors
First Named Inventor/Applicant Name:	Clarke W. McAllister
Filer:	Oleg F. Kaplun/sandy gellineau
Attorney Docket Number:	30139/00103

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt

EFS ID:	29833459
Application Number:	15042993
International Application Number:	
Confirmation Number:	7577
Title of Invention:	Systems, Methods, And Devices For Commissioning Wireless Sensors
First Named Inventor/Applicant Name:	Clarke W. McAllister
Customer Number:	30636
Filer:	Oleg F. Kaplun/sandy gellineau
Filer Authorized By:	Oleg F. Kaplun
Attorney Docket Number:	30139/00103
Receipt Date:	19-JUL-2017
Filing Date:	12-FEB-2016
Time Stamp:	17:23:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$180
RAM confirmation Number	072017INTEFSW17245200
Deposit Account	501492
Authorized User	sandy gellineau

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		00103ids19July17.pdf	615177 363a587c6fa69db76060b4be9042da71da479b8a	yes	5

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Transmittal Letter	1	1
Miscellaneous Incoming Letter	2	2
Information Disclosure Statement (IDS) Form (SB08)	3	5

Warnings:

Information:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
2		nplREFS.pdf	5106741 7d4f878143a1d46a57e32618b95b24684d6299a8	yes	14

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Non Patent Literature	1	9
Non Patent Literature	10	14

Warnings:

Information:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
3	Fee Worksheet (SB06)	fee-info.pdf	30436 f81fe4cb2a5a8aff39411df2afb2ec2cbeb6f0df	no	2

Warnings:

Information:

Total Files Size (in bytes):	5752354

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

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National Stage of an International Application under 35 U.S.C. 371

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New International Application Filed with the USPTO as a Receiving Office

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Attorney Docket No.30139/00103

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	McAllister
Serial No.	:	15/042,993
Filed	:	February 12, 2016
For	:	Systems, Methods, And Devices For Commissioning Wireless Sensors
Group Art Unit	:	2685
Confirmation No.	:	7577
Examiner	:	Thomas J Mullen

Certificate of Facsimile / Electronic Filing
I hereby certify that this correspondence is being deposited via facsimile or Electronic Filing addressed to:

Mail Stop: 312 Amendments
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
571-273-8300

By: _____ Date: July 19, 2017
Michael J. Marcin (Reg. No. 48,198)

Mail Stop: 312 Amendments
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL

Transmitted herewith please find an Information Disclosure Statement ("IDS"), a PTO-1449 form and two (2) references for filing in the above-identified application. Please charge the Credit Card of Fay Kaplun & Marcin in the amount of $180.00 for the filing fees. The Commissioner is hereby authorized to charge the **Deposit Account of Fay Kaplun & Marcin, LLP No. 50-1492** for any additional fees.

Respectfully submitted,

Dated: July 19, 2017

By: _____

Michael J. Marcin (Reg. No. 48,198)
Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, NY 10038
Tel: (212)619-6000
Fax: (212) 619-0276

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103	7577

7590 07/14/2017

FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

EXAMINER	
MULLEN, THOMAS J	
ART UNIT	PAPER NUMBER
2685	
MAIL DATE	DELIVERY MODE
07/14/2017	PAPER

NOTICE OF NON-COMPLIANT INFORMATION DISCLOSURE STATEMENT

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☐ The IDS lacks the fee set forth in 37 CFR 1.17(p).

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571-272-4200 or 1-888-786-0101
Application Assistance Unit
Office of Data Management

Document code: WFEE

United States Patent and Trademark Office
Sales Receipt for Accounting Date: 10/31/2017

DMARTINO ADJ #00000001 Mailroom Dt: 07/19/2017
Seq No: 4342 Sales Acctg Dt: 07/20/2017 15042993
01 FC : 1806 -180.00 OP

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449	ATTY. DOCKET NO. 30139/00103	SERIAL NO. 15/042,993
	APPLICANT(S) McAllister	
	FILING DATE February 12, 2016	

U. S. PATENT DOCUMENTS

EXAMINER INITIAL	PATENT / PUBLICATION NUMBER	PATENT / PUBLICATION DATE	NAME	CLASS	SUBCLASS	FILING DATE'

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE (M/D/Y)	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

OTHER DOCUMENTS

EXAMINER INITIAL		AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
/T.J.M/		EPCTM Tag Data Standards Version 1.1 Rev.1.23, Last Call Working Draft on 16 February 2004, pp. 11, 19-25
/T.J.M/		RFID for Dummies, 5 pps., 2005

EXAMINER /THOMAS J MULLEN/	DATE CONSIDERED 07/21/2017
EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103	7577

30636 7590 07/21/2017

FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

EXAMINER	
MULLEN, THOMAS J	

ART UNIT	PAPER NUMBER
2685	

MAIL DATE	DELIVERY MODE
07/21/2017	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of Allowability	Application No. 15/042,993	Applicant(s) MCALLISTER, CLARKE W.	
	Examiner THOMAS MULLEN	Art Unit 2685	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the IDS filed 7/19/17*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☐ The allowed claim(s) is/are _____. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/Thomas Mullen/
Primary Examiner, AU 2685
571-272-2965

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	McAllister
Serial No.	:	15/042,993
Filed	:	February 12, 2016
For	:	Systems, Methods, And Devices For Commissioning Wireless Sensors
Group Art Unit	:	2685
Confirmation No.	:	7577
Examiner	:	Thomas J Mullen

Mail Stop: RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CONTINUED EXAMINATION (RCE)

Applicants are hereby filing for a Request for Continuing Examination (RCE) of the application under 37 C.F.R. 1.114 and respectfully request that the Amendment filed herewith be entered and considered.

Respectfully submitted,

Dated: August 10, 2017

By:_____

Michael J. Marcin, Esq. (Reg. No. 48,198)
Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, New York 10038
Tel: (212) 619-6000
Fax: (212) 619-0276

Attorney Docket No. 30139/00103

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	McAllister
Serial No.	:	15/042,993
Filed	:	February 12, 2016
For	:	Systems, Methods, And Devices For Commissioning Wireless Sensors
Group Art Unit	:	2685
Confirmation No.	:	7577
Examiner	:	Thomas J Mullen

Certificate of Facsimile / Electronic Filing
I hereby certify that this correspondence is being deposited via facsimile or Electronic Filing addressed to:

Mail Stop: RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
571-273-8300

By: _____ Date: August 10, 2017
Michael J. Marcin (Reg. No. 48,198)

Mail Stop: RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL

Transmitted herewith please find a Request for Continued Examination ("RCE") and an Amendment for filing in the above-identified application. Please charge the Credit Card of **Fay Kaplun & Marcin, LLP** in the amount of $1,200.00 for the filing fees. The Commissioner is authorized to charge any additional fees to the **Deposit Account of Fay Kaplun & Marcin, LLP No. 50-1492**.

Respectfully submitted,

Dated: August 10, 2017

By: _____

Michael J. Marcin (Reg. No. 48,198)
Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, NY 10038
Tel: (212)619-6000
Fax: (212) 619-0276

Electronic Patent Application Fee Transmittal

Application Number:	15042993
Filing Date:	12-Feb-2016
Title of Invention:	Systems, Methods, And Devices For Commissioning Wireless Sensors
First Named Inventor/Applicant Name:	Clarke W. McAllister
Filer:	Oleg F. Kaplun/sandy gellineau
Attorney Docket Number:	30139/00103

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
RCE- 1st Request	1801	1	1200	1200
		Total in USD ($)		**1200**

Electronic Acknowledgement Receipt

EFS ID:	30047216
Application Number:	15042993
International Application Number:	
Confirmation Number:	7577
Title of Invention:	Systems, Methods, And Devices For Commissioning Wireless Sensors
First Named Inventor/Applicant Name:	Clarke W. McAllister
Customer Number:	30636
Filer:	Oleg F. Kaplun/sandy gellineau
Filer Authorized By:	Oleg F. Kaplun
Attorney Docket Number:	30139/00103
Receipt Date:	10-AUG-2017
Filing Date:	12-FEB-2016
Time Stamp:	16:54:32
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$1200
RAM confirmation Number	081117INTEFSW16552600
Deposit Account	501492
Authorized User	sandy gellineau

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		00103RCEAMDT10AUG17.pdf	759781 6c9752cc21db06182da0cb78253a0c2828ffc322	yes	8

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Amendment Submitted/Entered with Filing of CPA/RCE	3	8
Request for Continued Examination (RCE)	2	2
Transmittal Letter	1	1

Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30451 611a9a4dcf42541bd8acba05515773628d79cb6d	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	790232		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	McAllister
Serial No.	:	15/042,993
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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT WITH RCE

In response to the Notice of Allowance mailed on June 7, 2017 the Applicant respectfully requests entry of the following amendment.

SML Exhibit 1003 - Page 272

IN THE CLAIMS

1-16. (Cancelled)

17. (Currently Amended) An RFID transponder comprising:

a substrate;

an antenna structure formed on the substrate; and

an RFID integrated circuit chip which is electrically coupled to the antenna structure,

wherein the RFID integrated circuit chip is encoded with a unique object number, the unique object number comprising an object class information space and a unique serial number space, [[and]]

wherein the unique serial number space is encoded with one serial number instance from an allocated block of serial numbers, the allocated block being assigned a limited number of most significant bits,

wherein the unique serial number space ~~has an allocated block stored therein defined by a~~ comprises the limited number of most significant bits corresponding to the allocated block and of remaining bits of lesser significance that together comprise the one serial number instance ~~of the unique serial number space~~.

18. (Cancelled)

19. (Previously Presented) The RFID transponder of claim 17, wherein the object class information space is encoded with information comprising a company prefix, an item reference, a partition value, and a filter value.

20. (Previously Presented) The RFID transponder of claim 17, wherein the unique object number is a portion of a serialized global trade item number.

SML Exhibit 1003 - Page 273

21. (Previously Presented) The RFID transponder of claim 20, wherein the serialized global trade item number is an EPC SGTIN-96 encoding.

22. (Previously Presented) The RFID transponder of claim 17, wherein the unique serial number space is at least 38 bits.

23. (Previously Presented) The RFID transponder of claim 17, wherein the allocated block is defined by at least 3 most significant bits.

24. (Cancelled)

25. (Previously Presented) The RFID transponder of claim 17, wherein the allocated block is one of a plurality of allocations intermittently received by an encoder.

26. (Previously Presented) The RFID transponder of claim 17, wherein the RFID integrated circuit chip is comprised of silicon.

27. (Previously Presented) The RFID transponder of claim 17, wherein the RFID integrated circuit chip is comprised of polymer.

28. (Previously Presented) The RFID transponder of claim 17, wherein the substrate, antenna structure, and RFID integrated circuit chip are covered by a face stock material.

29. (Previously Presented) The RFID transponder of claim 17, wherein the RFID integrated circuit chip is disposed on the substrate.

30. (Currently Amended) A RFID transponder comprising:

a substrate;

an antenna structure formed on the substrate; and

an RFID integrated circuit chip which is electrically coupled to the antenna structure,

SML Exhibit 1003 - Page 274

wherein the RFID integrated circuit chip is encoded with a global trade item number including a unique object number, the unique object number comprising an object class information space including a block of at least 50 bits and a unique serial number space including a block of at least 38 bits, [[and]]

wherein the unique serial number space has one serial number instance from an ~~at least one~~ allocated block of serial numbers, the allocated block being assigned a limited number of most significant bits, and

wherein the unique serial number space comprises ~~stored therein defined by~~ at least 3 most significant bits corresponding to the allocated block ~~of the unique serial number space~~.

31. (Currently Amended) The RFID transponder of claim 30, wherein the unique serial number space further comprises remaining bits of lesser significance that together with the at least 3 most significant bits comprise the one serial number instance ~~of the unique serial number space are encoded with a unique serial number for the object class~~.

32. (Currently Amended) An integrated circuit, comprising:

a radio frequency circuit configured to backscatter a return link signal for processing by an RFID interrogator;

control logic; and

a memory,

wherein the memory is configured with a unique object number space, the unique object number space comprising an object class information space and a unique serial number space, [[and]]

wherein the unique serial number space is encoded with one serial number instance from an allocated block of serial numbers, the allocated block being assigned a limited number of most significant bits,

wherein the unique serial number space ~~is encoded with an allocated block defined by a~~ comprises the limited number of most significant bits corresponding to the allocated block and of remaining bits of lesser significance that together comprise the one serial number instance ~~of the unique serial number space bits~~.

SML Exhibit 1003 - Page 275

33. (Cancelled)

34. (Previously Presented) The integrated circuit of claim 32, wherein the object class information space is encoded with information comprising a company prefix, an item reference, a partition value, and a filter value.

35. (Previously Presented) The integrated circuit of claim 32, wherein the unique object number is a portion of a serialized global trade item number.

36. (Previously Presented) The integrated circuit of claim 35, wherein the serialized global trade item number is an EPC SGTIN-96 encoding.

37. (New) The RFID transponder of claim 17, wherein the limited number of most significant bits that correspond to the allocated block further correspond to an encoder that encodes the RFID transponder.

38. (New) The RFID transponder of claim 30, wherein the at least 3 most significant bits that correspond to the allocated block further correspond to an encoder that encodes the RFID transponder.

39. (New) The integrated circuit of claim 32, wherein the limited number of most significant bits that correspond to the allocated block further correspond to an encoder that encodes the memory of the integrated circuit.

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REMARKS

Claims 18, 24 and 33 have been cancelled. Claims 17 and 30-32 have been amended to more accurately recite the claimed subject matter. Claim 37-39 have been added. No new matter has been added. Claims 17, 19-23, 25-32 and 34-39 are currently pending in this application.

It is respectfully submitted that the presently pending claims are novel, nonobvious and useful and that the present application is in condition for allowance. A prompt and favorable action on the merits is earnestly solicited. The Examiner is invited to contact the undersigned to discuss any matter concerning this application.

Respectfully submitted,

Dated: August 10, 2017

By: /Michael J. Marcin/
Michael Marcin (Reg. No. 48,198)

Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, NY 10038
Phone: 212-619-6000
Fax: 212-619-0276

SML Exhibit 1003 - Page 277

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/042,993	Filing Date 02/12/2016	☐ To be Mailed

ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	08/10/2017	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X $80 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X $420 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	0

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
KIMBERLY PANNELL

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15042993	MCALLISTER, CLARKE W.
	Examiner	Art Unit
	THOMAS MULLEN	2685

CPC- SEARCHED

Symbol	Date	Examiner
G06K 2017/0045,0051; 19/077,07716	2/9/17	TM
B65C 9/1865, 11/006	2/9/17	TM
UPDATE	5/12/17	TM
UPDATE	9/5/17	TM

CPC COMBINATION SETS - SEARCHED

Symbol	Date	Examiner

US CLASSIFICATION SEARCHED

Class	Subclass	Date	Examiner
340	572.1-572.9,10.1-10.6	2/9/17	TM
709	217	2/9/17	TM
705	28	2/9/17	TM
UPDATE		5/12/17	TM
UPDATE		9/5/17	TM

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

SEARCH NOTES

Search Notes	Date	Examiner
EAST (text-limited CPC & USPC classes/subs, see scanned search history)	2/9/17	TM
EAST (text-limited CPC & USPC classes/subs, see scanned search history)	5/12/17	TM
EAST	9/5/17	TM

INTERFERENCE SEARCH

US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
G06K	19/077,07716	5/12/17	TM
B65C	9/1865, 11/006	5/12/17	TM
UPDATE		9/5/17	TM

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L14	37998	((serial identif$7) adj (number$1 code codes)) near3 (block$1 set$1 subset$1 cluster$1 group$1 range$1 list$1)	US-PGPUB; USPAT	OR	OFF	2017/09/05 11:54
L15	178	L14 same ((writ$3 encod$3 program$5) near2 ((wireless rf "radio frequency" rf$1id) adj (tag$1 transponder$1)))	US-PGPUB; USPAT	OR	OFF	2017/09/05 11:54

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L16	5873	(((serial identif$7) adj (number$1 code codes)) near3 (block$1 set$1 subset$1 cluster$1 group$1 range$1 list$1)).clm.	US-PGPUB; USPAT	OR	OFF	2017/09/05 11:57
L17	7	16 same ((writ$3 encod$3 program$5) near2 ((wireless rf "radio frequency" rf$1id) adj (tag$1 transponder$1))).clm.	US-PGPUB; USPAT	OR	OFF	2017/09/05 11:59
L18	4320	(((serial identif$7) adj (number$1 code codes)) near3 (block$1 set$1 subset$1 cluster$1 range$1 list$1)).clm.	US-PGPUB; USPAT	OR	OFF	2017/09/05 12:01
L19	19	18 and ((writ$3 encod$3 program$5) near2 ((wireless rf "radio frequency" rf$1id) adj (tag$1 transponder$1))).clm.	US-PGPUB; USPAT	OR	OFF	2017/09/05 12:01

9/5/2017 12:07:13 PM
C:\Users\tmullen\Documents\EAST\Workspaces\15042993.wsp

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4598	G06K2017/0045,0051.cpc. G06K19/077,07716.cpc. B65C9/1865.cpc. B65C11/006.cpc.	US-PGPUB; USPAT	OR	OFF	2017/09/05 11:34
L2	43002	((340/572.1-572.9,10.1-10.6) or (709/217) or (705/28)).CCLS.	US-PGPUB; USPAT	OR	OFF	2017/09/05 11:34
L3	300	((unique serial) adj2 number$1) same (block$1 near5 bits)	US-PGPUB; USPAT	OR	OFF	2017/09/05 11:34
L7	119	(allocat$3 apportion$3 assign$4 send$3 sent receive received receives receiving download$3 upload$3) near5 (((block$1 cluster$1 group$1 range$1 list$1 set$1 sub$1set$1) near2 ((serial identif$7) adj (number$1 code codes))) near10 (tag$1 transponder$1))	US-PGPUB; USPAT	OR	OFF	2017/09/05 11:46
L8	50	7 and (1 2)	US-PGPUB; USPAT	OR	OFF	2017/09/05 11:47
L9	21	3 and (1 2)	US-PGPUB; USPAT	OR	OFF	2017/09/05 11:47

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L5	2515	G06K19/077,07716.cpc. B65C9/1865.cpc. B65C11/006.cpc.	US-PGPUB; USPAT	OR	OFF	2017/09/05 11:40
L6	12	(((unique serial) adj2 number$1) same (block$1 near5 bits)).clm.	US-PGPUB; USPAT	OR	OFF	2017/09/05 11:40
L10	22	((allocat$3 apportion$3 assign$4 send$3 sent receive received receives receiving download$3 upload$3) near5 (((block$1 cluster$1 group$1 range$1 list$1 set$1 sub$1set$1) near2 ((serial identif$7) adj (number$1 code codes))) near10 (tag$1 transponder$1))).clm.	US-PGPUB; USPAT	OR	OFF	2017/09/05 11:47
L11	2657	(((serial identif$7) adj (number$1 code codes)) near10 (tag$1 transponder$1)).clm.	US-PGPUB; USPAT	OR	OFF	2017/09/05 11:48
L12	3	5 and (6 10)	US-PGPUB; USPAT	OR	OFF	2017/09/05 11:49
L13	9	5 and 11	US-PGPUB; USPAT	OR	OFF	2017/09/05 11:49

9/ 5/ 2017 11:50:33 AM
C:\ Users\ tmullen\ Documents\ EAST\ Workspaces\ 15042993.wsp

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15042993	MCALLISTER, CLARKE W.
	Examiner	**Art Unit**
	THOMAS MULLEN	2685

CPC						
Symbol					**Type**	**Version**
G06K		19	/	07716	F	2013-01-01
B65C		9	/	1865	I	2013-01-01
B65C		11	/	006	I	2013-01-01
B65C		2009	/	0003	A	2013-01-01
B65C		2009	/	404	A	2013-01-01
G06K		19	/	077	I	2013-01-01
G06K		2017	/	0041	A	2013-01-01
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CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
			/					
			/					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/THOMAS MULLEN/ Primary Examiner.Art Unit 2685	9/5/17	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	15

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15042993	MCALLISTER, CLARKE W.
	Examiner	**Art Unit**
	THOMAS MULLEN	2685

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
340	10.51	H	0	4	Q	5 / 22 (2006.01.01)						

CROSS REFERENCE(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/THOMAS MULLEN/ Primary Examiner.Art Unit 2685	9/5/17	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	15

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15042993	MCALLISTER, CLARKE W.
	Examiner	**Art Unit**
	THOMAS MULLEN	2685

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	1	17		33										
	2		18	17	34										
	3	2	19	18	35										
	4	3	20	19	36										
	5	4	21	12	37										
	6	5	22	15	38										
	7	6	23	20	39										
	8		24												
	9	7	25												
	10	8	26												
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	12	10	28												
	13	11	29												
	14	13	30												
	15	14	31												
	16	16	32												

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/THOMAS MULLEN/ Primary Examiner.Art Unit 2685	9/5/17	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	15

UNITED STATES PATENT AND TRADEMARK OFFICE

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NOTICE OF ALLOWANCE AND FEE(S) DUE

30636 7590 09/08/2017
FAY KAPLUN & MARCIN, LLP
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NEW YORK, NY 10038

EXAMINER
MULLEN, THOMAS J

ART UNIT	PAPER NUMBER
2685	

DATE MAILED: 09/08/2017

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103	7577

TITLE OF INVENTION: SYSTEMS, METHODS, AND DEVICES FOR COMMISSIONING WIRELESS SENSORS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	12/08/2017

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

30636 7590 09/08/2017
FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

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15/042,993	02/12/2016	Clarke W. McAllister	30139/00103	7577

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nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	12/08/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
MULLEN, THOMAS J	2685	340-010510

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ❑ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ❑ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

SML Exhibit 1003 - Page 288

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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30636 7590 09/08/2017

FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

EXAMINER	
MULLEN, THOMAS J	

ART UNIT	PAPER NUMBER
2685	

DATE MAILED: 09/08/2017

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 15/042,993	Applicant(s) MCALLISTER, CLARKE W.	
	Examiner THOMAS MULLEN	Art Unit 2685	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the RCE/amendment filed 8/10/17*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *17,19-23,25-32 and 34-39*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☒ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/Thomas Mullen/
Primary Examiner, AU 2685
571-272-2965

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in an interview with Michael Marcin on 9/6/17.

IN THE CLAIMS

Claim 17, line 11, after the comma has been inserted --and--.

Claim 17, line 14, "and of" has been changed to simply, --and--.

Claim 32, line 11, after the comma has been inserted --and--.

Claim 32, line 14, "and of" has been changed to simply, --and--.

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Mullen whose telephone number is (571)272-2965. The examiner can normally be reached on Mon.-Fri. (alternate Fridays) from 7:30 to 4:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hai Phan, can be reached on 571-272-6338. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://portal.uspto.gov/external/portal. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Thomas J. Mullen/
Primary Examiner
Art Unit 2685

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	McAllister
Serial No.	:	15/042,993
Filed	:	February 12, 2016
For	:	Systems, Methods, And Devices For Commissioning Wireless Sensors
Group Art Unit	:	2685
Confirmation No.	:	7577
Examiner	:	Thomas J Mullen

Mail Stop: 312 Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RULE 312 AMENDMENT

In response to the Notice of Allowance mailed on June 7, 2017 the Applicant respectfully requests entry of the following amendment.

SML Exhibit 1003 - Page 293

Receipt date: 06/26/2017

INFORMATION DISCLOSURE STATEMENT BY APPLICANT FORM PTO-1449	ATTY. DOCKET NO. 30139/00103	SERIAL NO. 15/042,993
	APPLICANT(S) McAllister	
	FILING DATE February 12, 2016	

U. S. PATENT DOCUMENTS

EXAMINER INITIAL	PATENT / PUBLICATION NUMBER	PATENT / PUBLICATION DATE	NAME	CLASS	SUBCLASS	FILING DATE*

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE (M/D/Y)	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

OTHER DOCUMENTS

EXAMINER INITIAL		AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.
/T.J.M/		EPCTM Tag Data Standards Version 1.1 Rev.1.23, Last Call Working Draft on 16 February 2004, pp. 11, 19-25
/T.J.M/		RFID for Dummies, 5 pps., 2005

EXAMINER /THOMAS J MULLEN/	DATE CONSIDERED 07/15/2017
EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

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CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

30636 7590 09/08/2017
FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Michael J. Marcin	(Depositor's name)
	(Signature)
September 18, 2017	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/042,993	02/12/2016	Clarke W. McAllister	30139/00103	7577

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nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	12/08/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
MULLEN, THOMAS J	2685	340-010510

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Fay Kaplun & Marcin, LLP
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: ADASA INC.

(B) RESIDENCE: (CITY and STATE OR COUNTRY): EUGENE, OR

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ☐ A check is enclosed.
- ☒ Payment by credit card. Form PTO-2038 is attached.
- ☒ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 50-1492 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
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NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date September 18, 2017

Typed or printed name Michael J. Marcin Registration No. 48198

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

SML Exhibit 1003 - Page 295

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

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CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

30636 7590 09/08/2017
FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Michael J. Marcin	(Depositor's name)
	(Signature)
September 18, 2017	(Date)

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15/042,993	02/12/2016	Clarke W. McAllister	30139/00103	7577

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EXAMINER	ART UNIT	CLASS-SUBCLASS
MULLEN, THOMAS J	2685	340-010510

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Fay Kaplun & Marcin, LLP
2
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3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: ADASA INC.

(B) RESIDENCE: (CITY and STATE OR COUNTRY): EUGENE, OR

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ☐ A check is enclosed.
- ☒ Payment by credit card. Form PTO-2038 is attached.
- ☒ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 50-1492 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date September 18, 2017

Typed or printed name Michael J. Marcin Registration No. 48198

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

SML Exhibit 1003 - Page 296

Electronic Patent Application Fee Transmittal

Application Number:	15042993
Filing Date:	12-Feb-2016
Title of Invention:	SYSTEMS, METHODS, AND DEVICES FOR COMMISSIONING WIRELESS SENSORS
First Named Inventor/Applicant Name:	Clarke W. McAllister
Filer:	Oleg F. Kaplun/sandy gellineau
Attorney Docket Number:	30139/00103

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	1501	1	960	960

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**960**

Electronic Acknowledgement Receipt

EFS ID:	30399315
Application Number:	15042993
International Application Number:	
Confirmation Number:	7577
Title of Invention:	SYSTEMS, METHODS, AND DEVICES FOR COMMISSIONING WIRELESS SENSORS
First Named Inventor/Applicant Name:	Clarke W. McAllister
Customer Number:	30636
Filer:	Oleg F. Kaplun/sandy gellineau
Filer Authorized By:	Oleg F. Kaplun
Attorney Docket Number:	30139/00103
Receipt Date:	18-SEP-2017
Filing Date:	12-FEB-2016
Time Stamp:	18:21:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$960
RAM confirmation Number	091917INTEFSW18225300
Deposit Account	501492
Authorized User	sandy gellineau

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	00103issuefees18Sept17.pdf	830237 4076818a8e731fd038a91dc1db8dbeba7ddead80	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30647 75c7b7e0f804738868f57ecab04cba63fe8ba3f9	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	860884		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/042,993	10/24/2017	9798967	30139/00103	7577

30636 7590 10/04/2017

FAY KAPLUN & MARCIN, LLP
150 BROADWAY, SUITE 702
NEW YORK, NY 10038

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Clarke W. McAllister, EUGENE, OR;
ADASA INC., Eugene, OR;

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Document code: WFEE

United States Patent and Trademark Office
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AO 120 (Rev. 08/10)

TO:	**Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313–1450**	**REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK**

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. 1116, you are hereby advised that a court action has been filed in the U.S. District Court for the District of Oregon on the following

☐ Trademarks or ☑ Patents (☐ the patent action involves 35 U.S.C. § 292):

DOCKET NO. 6:17–cv–01685–TC	DATE FILED 10/24/2017	U.S. DISTRICT COURT District of Oregon
PLAINTIFF Adasa Inc.		DEFENDANT Avery Dennison Corporation

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 9798967	10/24/2017	Adasa Inc.
2		
3		
4		
5		

In the above–entitled case, the following patent(s)/trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
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In the above–entitled case, the following decision has been rendered or judgment issued:

DECISION/JUDGMENT		
CLERK MARY L. MORAN	(BY) DEPUTY CLERK K. Finerson	DATE 10/25/2017

Copy 1 Upon initiation of action, mail this copy to Director Copy 3 Upon termination of action, mail this copy to Director
Copy 2 Upon filing document adding patent(s), mail this copy to Director Copy 4 Case file copy

AO 120 (Rev. 08/10)

TO:	**Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313–1450**	**REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK**

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. 1116, you are hereby advised that a court action has been filed in the U.S. District Court for the District of Oregon on the following

☐ Trademarks or ☑ Patents (☐ the patent action involves 35 U.S.C. § 292):

DOCKET NO. 6:17–cv–01685–MK	DATE FILED 10/24/2017	U.S. DISTRICT COURT District of Oregon
PLAINTIFF Adasa Inc.		DEFENDANT Avery Dennison Corporation

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 9798967	10/24/2017	Adasa Inc.
2		
3		
4		
5		

In the above–entitled case, the following patent(s)/trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above–entitled case, the following decision has been rendered or judgment issued:

DECISION/JUDGMENT Judgment in favor of Plaintff		
CLERK MARY L. MORAN	(BY) DEPUTY CLERK J. Klein	DATE 5/18/2021

Copy 1 Upon initiation of action, mail this copy to Director Copy 3 Upon termination of action, mail this copy to Director
Copy 2 Upon filing document adding patent(s), mail this copy to Director Copy 4 Case file copy