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(12) **EX PARTE REEXAMINATION CERTIFICATE** (11358th)
United States Patent
McAllister

(10) **Number:** **US 9,798,967 C1**(45) **Certificate Issued:** ***Jul. 30, 2018**(54) **SYSTEMS, METHODS, AND DEVICES FOR COMMISSIONING WIRELESS SENSORS**(71) Applicant: **ADASA INC.**, Eugene, OR (US)(72) Inventor: **Clarke W. McAllister**, Eugene, OR (US)(73) Assignee: **ADASA INC.**, Eugene, OR (US)**Reexamination Request:**

No. 90/014,052, Nov. 29, 2017

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(*) Notice: This patent is subject to a terminal disclaimer.

Related U.S. Application Data

- (63) Continuation of application No. 13/526,520, filed on Jun. 19, 2012, now Pat. No. 9,272,805, which is a continuation-in-part of application No. 12/820,109, filed on Jun. 21, 2010, now Pat. No. 8,228,198, which is a continuation-in-part of application No. 11/465,712, filed on Aug. 18, 2006, now Pat. No. 7,830,258, said application No. 12/820,109 is a continuation-in-part of application No. 12/124,768, filed on May 21, 2008, now abandoned.
- (60) Provisional application No. 60/709,713, filed on Aug. 19, 2005, provisional application No. 60/939,603, filed on May 22, 2007.

(51) **Int. Cl.****H04Q 5/22** (2006.01)**G06K 19/077** (2006.01)**B65C 9/18** (2006.01)**B65C 11/00** (2006.01)**B65C 9/40** (2006.01)**B65C 9/00** (2006.01)**G06K 17/00** (2006.01)(52) **U.S. Cl.**CPC **G06K 19/07716** (2013.01); **B65C 9/1865** (2013.01); **B65C 11/006** (2013.01); **G06K 19/077** (2013.01); **B65C 2009/0003** (2013.01); **B65C 2009/404** (2013.01); **G06K 2017/0041** (2013.01)(58) **Field of Classification Search**

None

See application file for complete search history.

(56)

References Cited

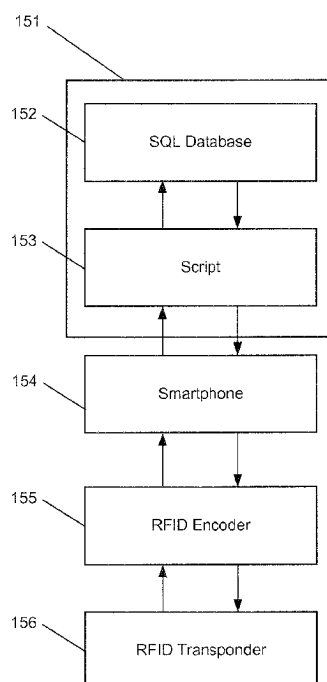
To view the complete listing of prior art documents cited during the proceeding for Reexamination Control Number 90/014,052, please refer to the USPTO's public Patent Application Information Retrieval (PAIR) system under the Display References tab.

Primary Examiner — Christina Y Leung

(57)

ABSTRACT

In one embodiment the present invention comprises a smart-phone 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.



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EX PARTE REEXAMINATION CERTIFICATE

THE PATENT IS HEREBY AMENDED AS
INDICATED BELOW.

Matter enclosed in heavy brackets [] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in italics indicates additions made to the patent.

AS A RESULT OF REEXAMINATION, IT HAS BEEN
DETERMINED THAT:

Claims 1, 13 and 16 are determined to be patentable as amended.

Claims 2-12, 14, 15 and 17-20, dependent on an amended claim, are determined to be patentable.

1. 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,
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 comprises the limited number of most significant bits *uniquely* corresponding to *the limited number of most significant bits* of the allocated block and of remaining bits of lesser significance that together comprise the one serial number instance.

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13. 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,
wherein the unique serial number space has one serial number instance from an 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 at least 3 most significant bits *uniquely* corresponding to *the limited number of most significant bits* of the allocated block.

16. 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,
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 comprises the limited number of most significant bits *uniquely* corresponding to *the limited number of most significant bits* of the allocated block and of remaining bits of lesser significance that together comprise the one serial number instance.

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