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(54) **METHODS AND SYSTEMS FOR MONITORING STERILIZATION STATUS**

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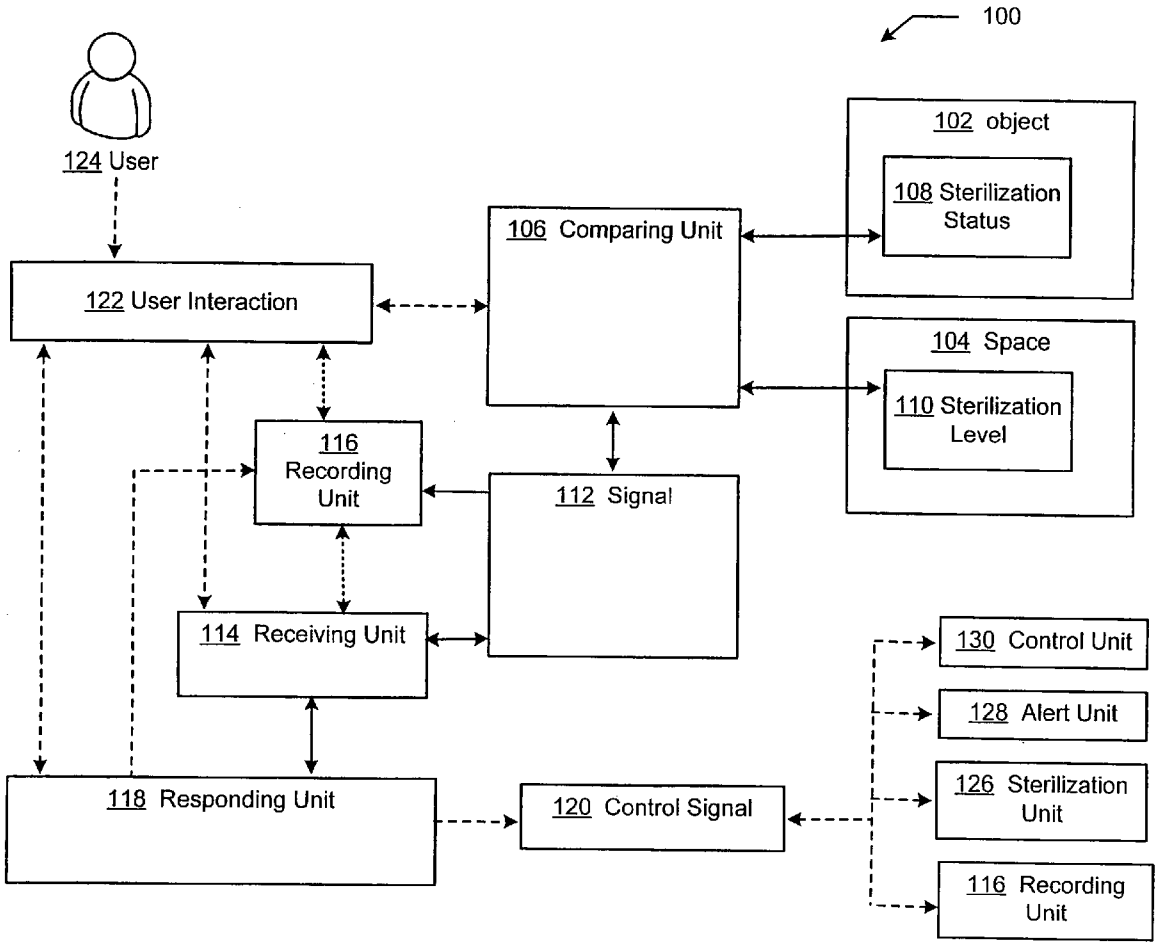
(57) **ABSTRACT**

Methods and systems for monitoring sterilization status are provided.



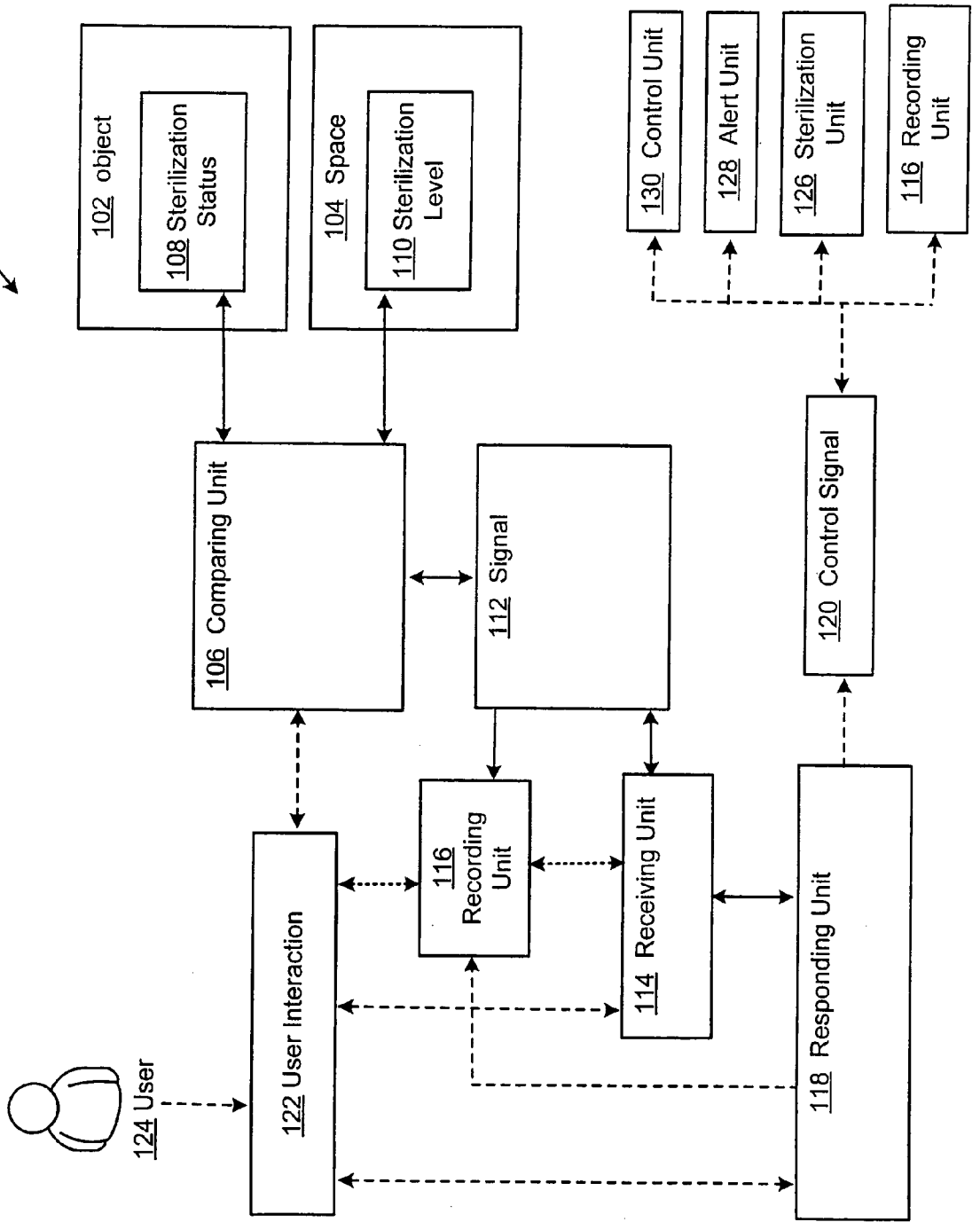

100
102 object
108 Sterilization Status
104 Space
110 Sterilization Level
130 Control Unit
128 Alert Unit
126 Sterilization Unit
116 Recording Unit
106 Comparing Unit
112 Signal
120 Control Signal
116 Recording Unit
114 Receiving Unit
122 User Interaction
118 Responding Unit
124 User

FIG. 1

FIG. 2

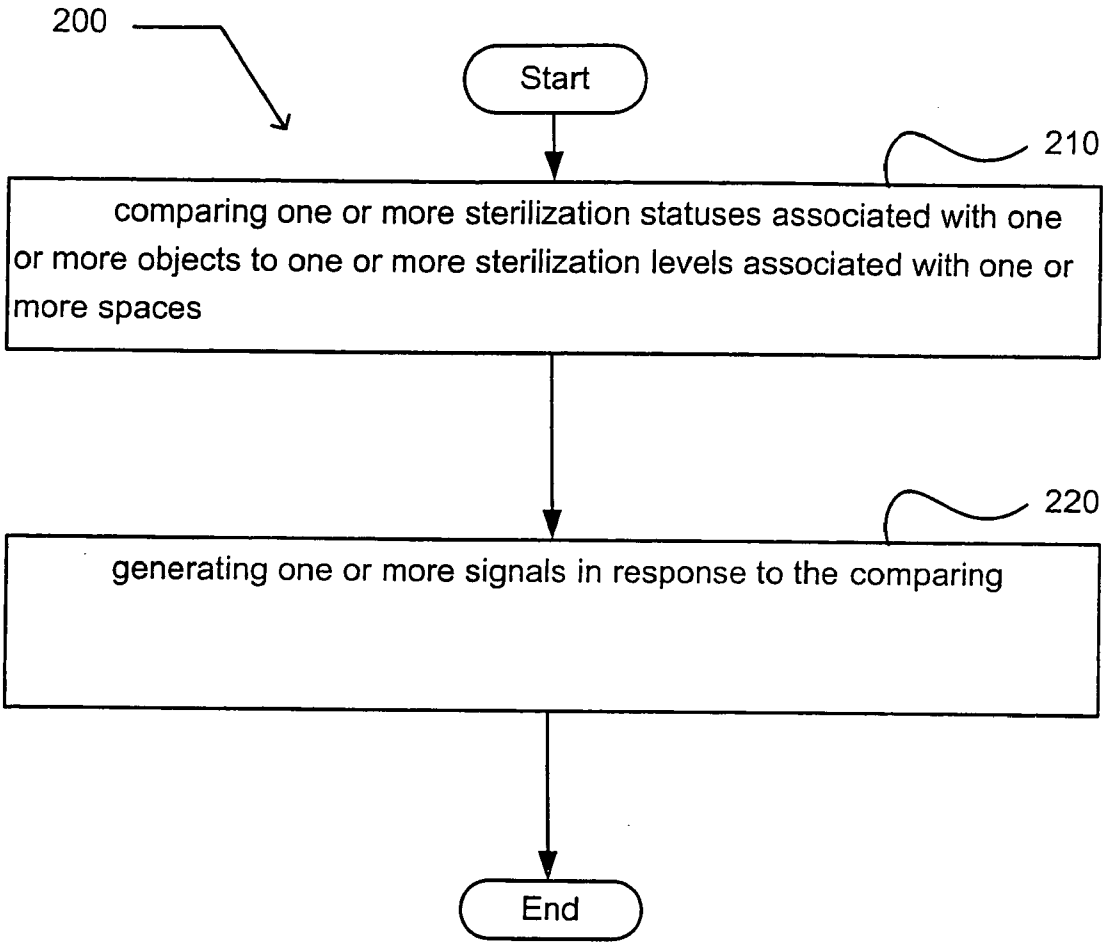

200
Start
210
comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces
220
generating one or more signals in response to the comparing
End

FIG. 3

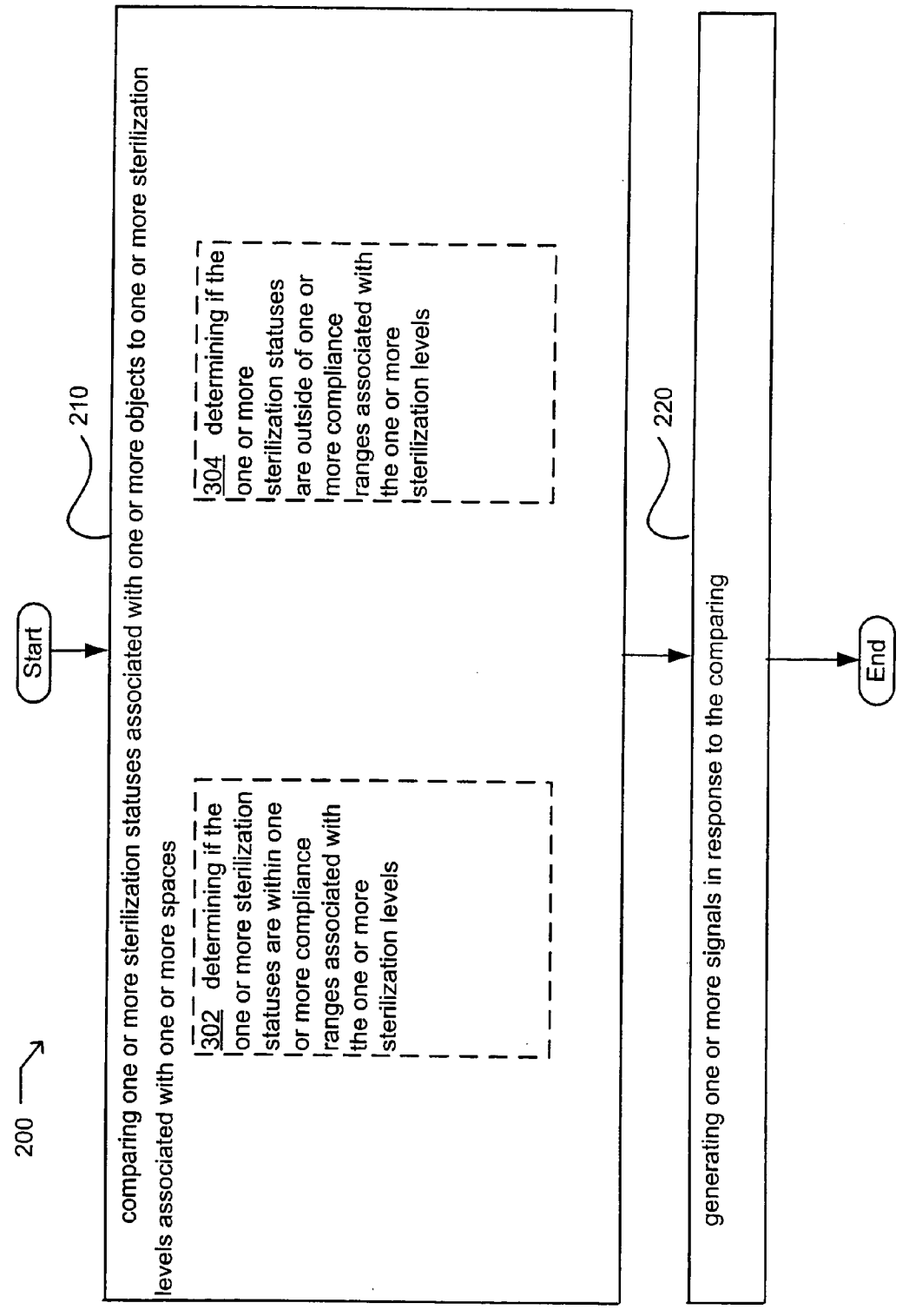

200
Start
210
comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces
302 determining if the one or more sterilization statuses are within one or more compliance ranges associated with the one or more sterilization levels
304 determining if the one or more sterilization statuses are outside of one or more compliance ranges associated with the one or more sterilization levels
220
generating one or more signals in response to the comparing
End

FIG. 4

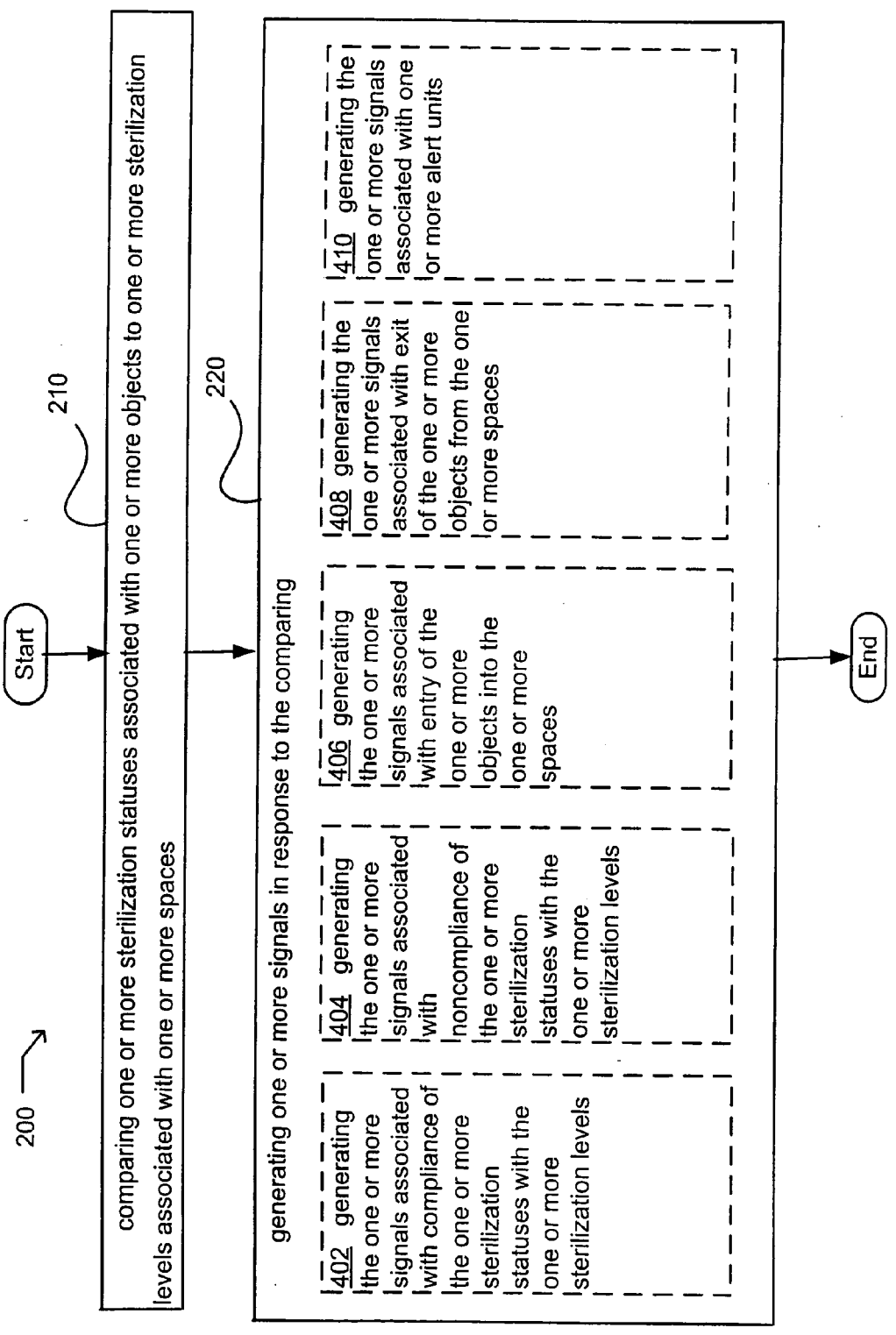

200
Start
210
comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces
220
generating one or more signals in response to the comparing
402 generating the one or more signals associated with compliance of the one or more sterilization statuses with the one or more sterilization levels
404 generating the one or more signals associated with noncompliance of the one or more sterilization statuses with the one or more sterilization levels
406 generating the one or more signals associated with entry of the one or more objects into the one or more spaces
408 generating the one or more signals associated with exit of the one or more objects from the one or more spaces
410 generating the one or more signals associated with one or more alert units
End

FIG. 5

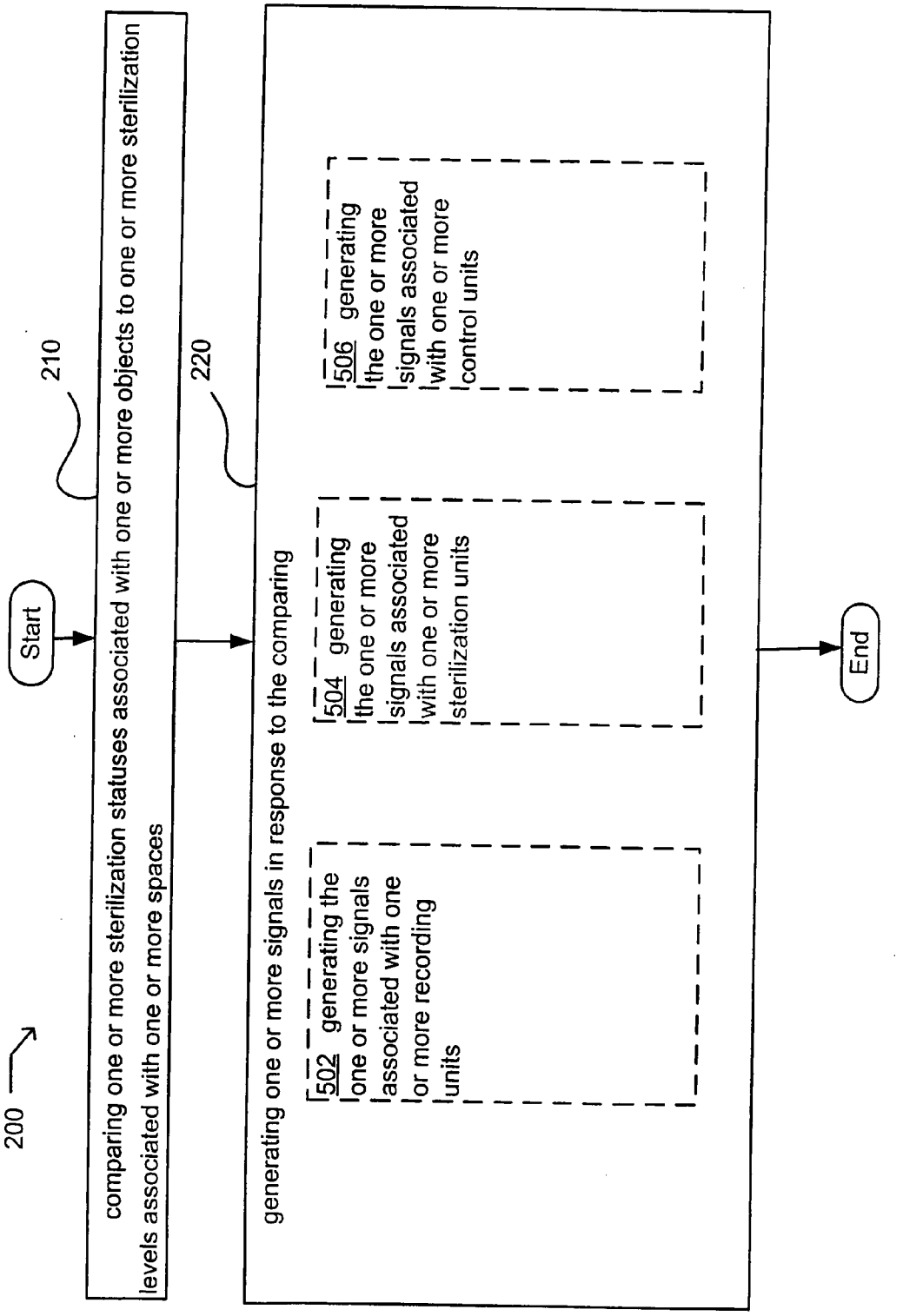

200
Start
210
comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces
220
generating one or more signals in response to the comparing
502 generating the one or more signals associated with one or more recording units
504 generating the one or more signals associated with one or more sterilization units
506 generating the one or more signals associated with one or more control units
End

FIG. 6

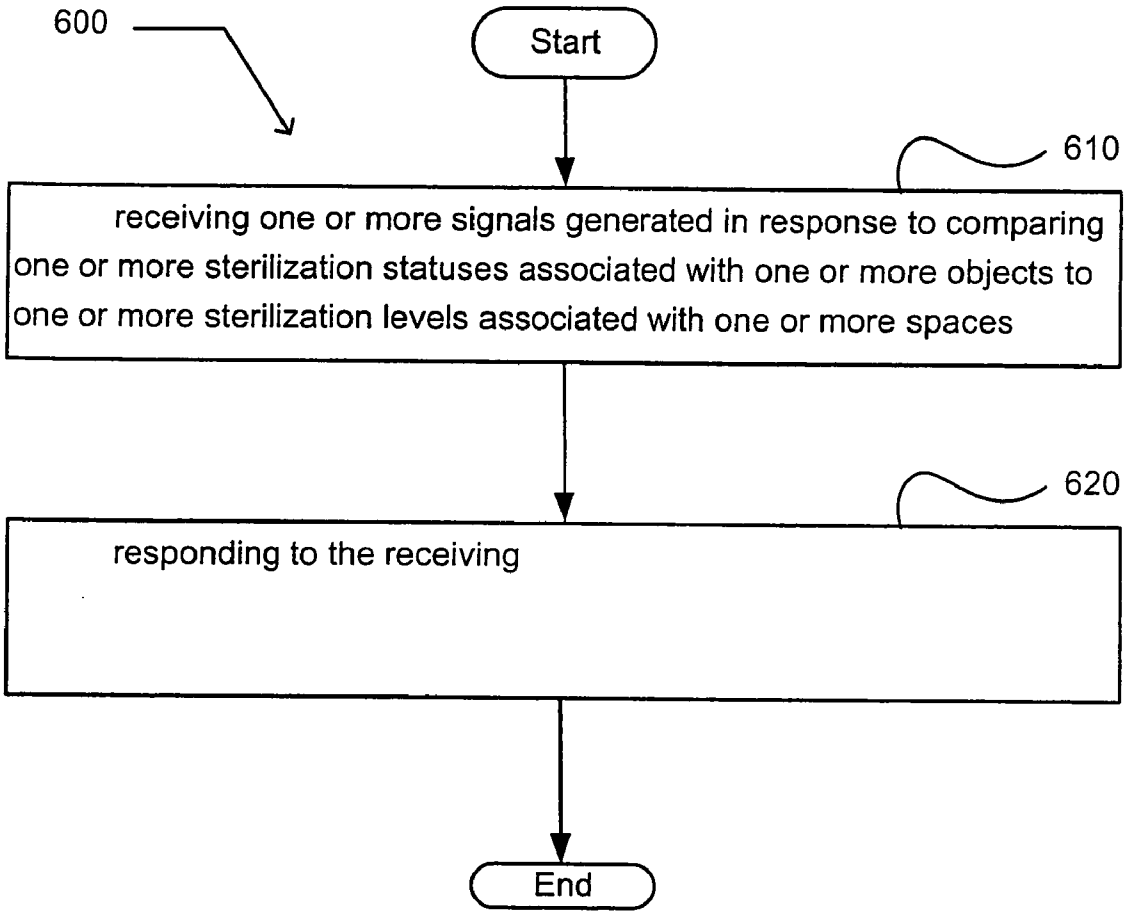

600
Start
610
receiving one or more signals generated in response to comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces
620
responding to the receiving
End

FIG. 7

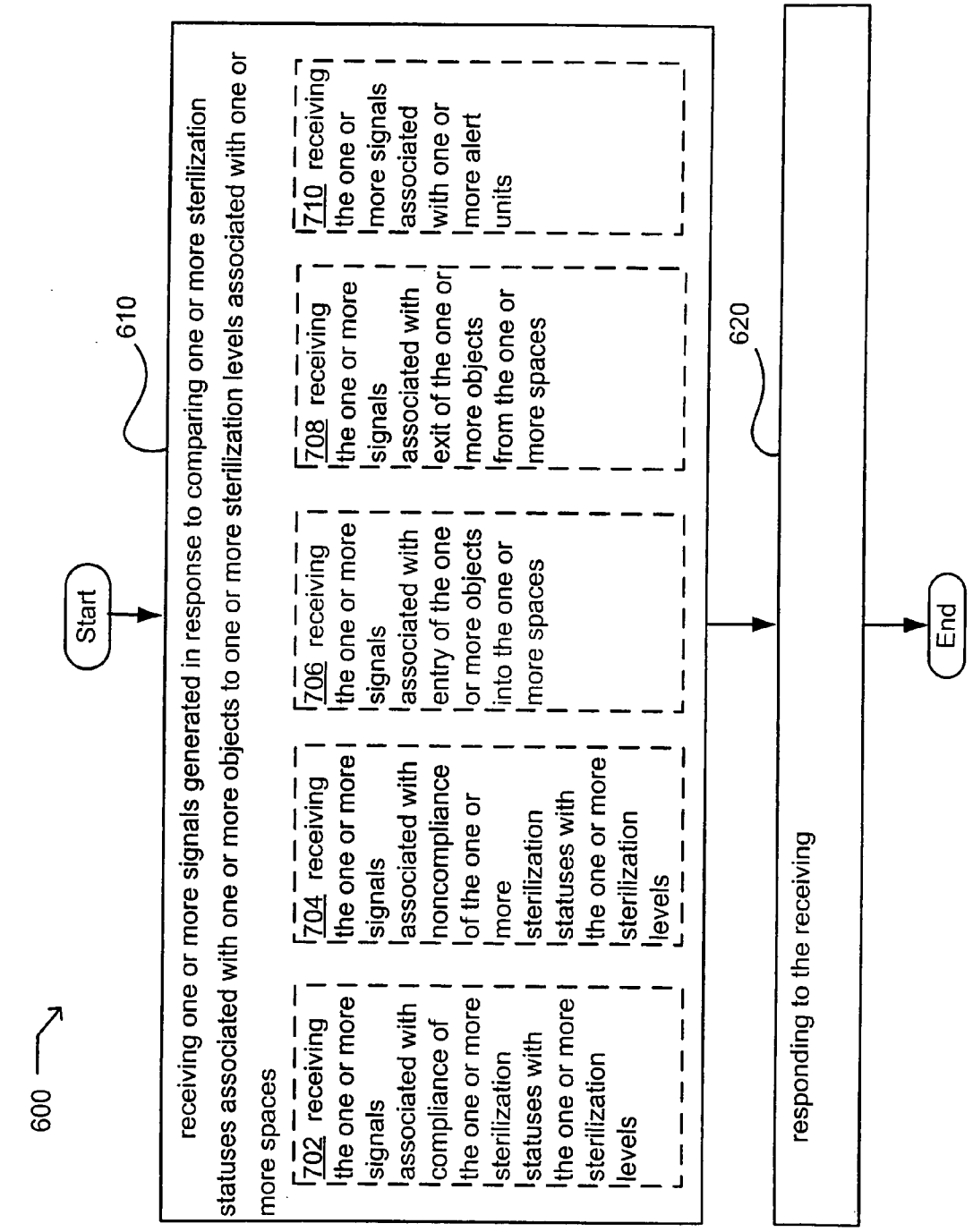

600
Start
610
receiving one or more signals generated in response to comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces
702 receiving the one or more signals associated with compliance of the one or more sterilization statuses with the one or more sterilization levels
704 receiving the one or more signals associated with noncompliance of the one or more sterilization statuses with the one or more sterilization levels
706 receiving the one or more signals associated with entry of the one or more objects into the one or more spaces
708 receiving the one or more signals associated with exit of the one or more objects from the one or more spaces
710 receiving the one or more signals associated with one or more alert units
620
responding to the receiving
End

FIG. 8

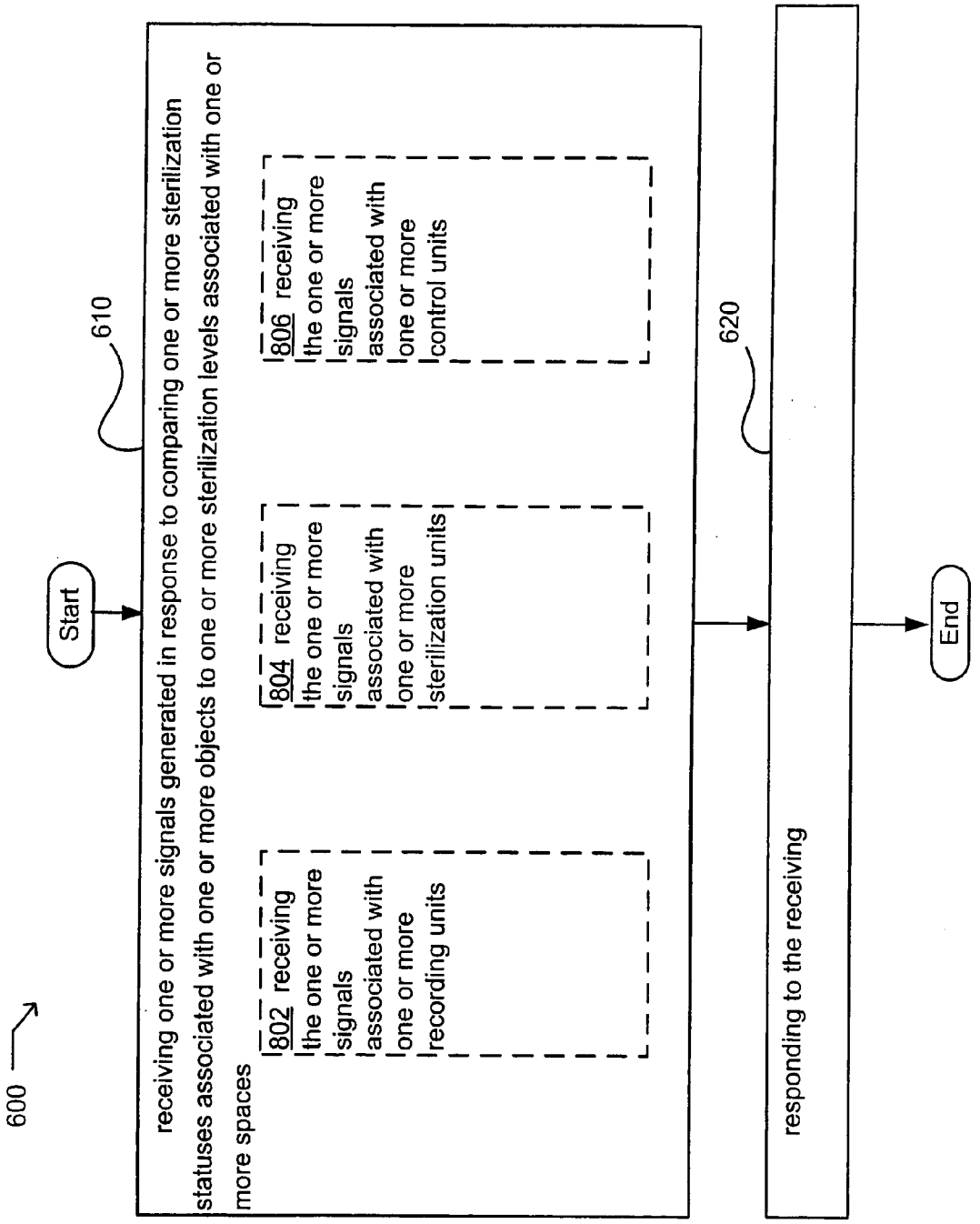

600
Start
610
receiving one or more signals generated in response to comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces
802 receiving the one or more signals associated with one or more recording units
804 receiving the one or more signals associated with one or more sterilization units
806 receiving the one or more signals associated with one or more control units
620
responding to the receiving
End

FIG. 9

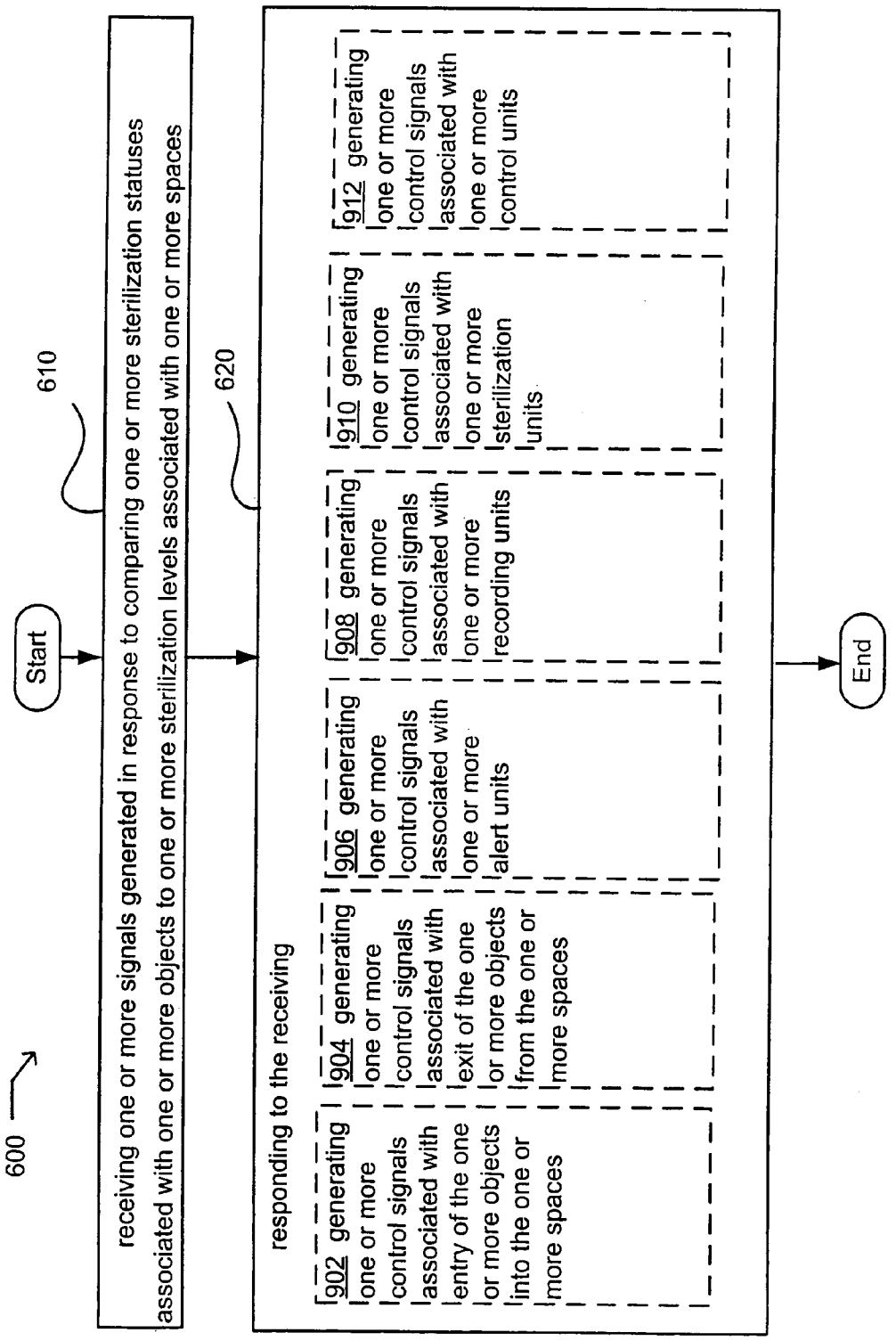

600
Start
610
receiving one or more signals generated in response to comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces
620
responding to the receiving
902 generating one or more control signals associated with entry of the one or more objects into the one or more spaces
904 generating one or more control signals associated with exit of the one or more objects from the one or more spaces
906 generating one or more control signals associated with one or more alert units
908 generating one or more control signals associated with one or more recording units
910 generating one or more control signals associated with one or more sterilization units
912 generating one or more control signals associated with one or more control units
End

FIG. 10

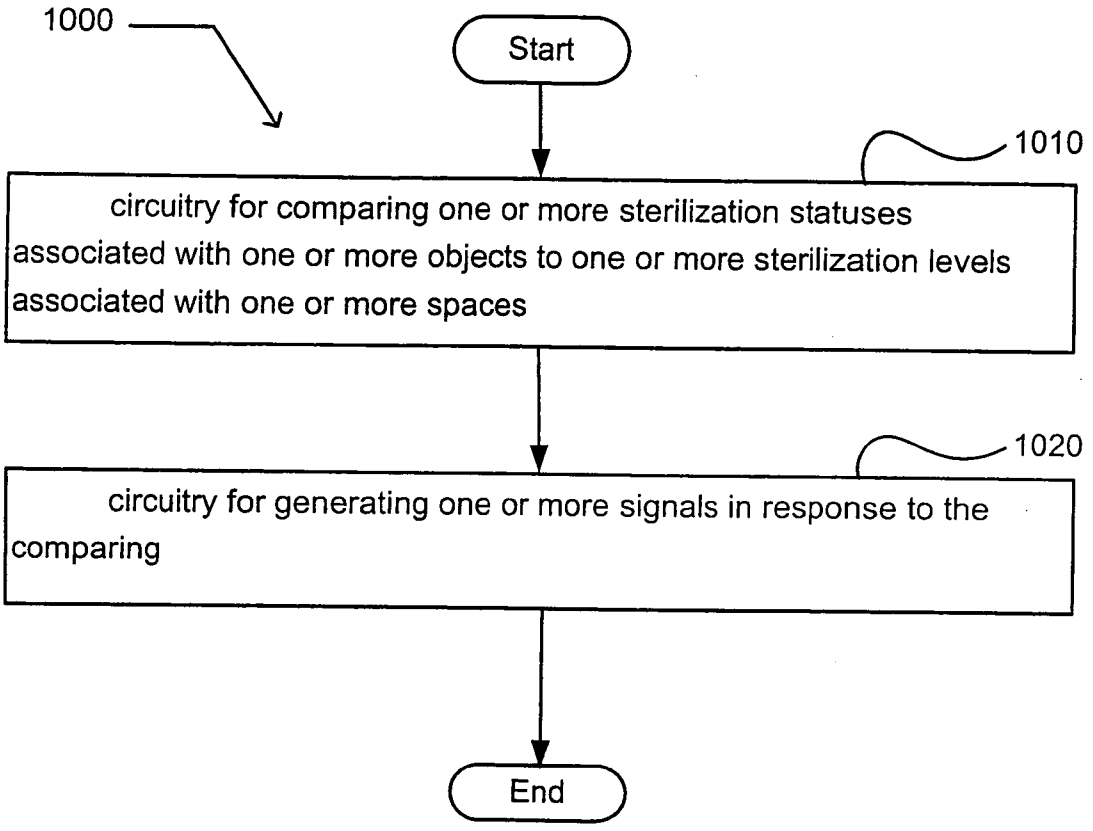
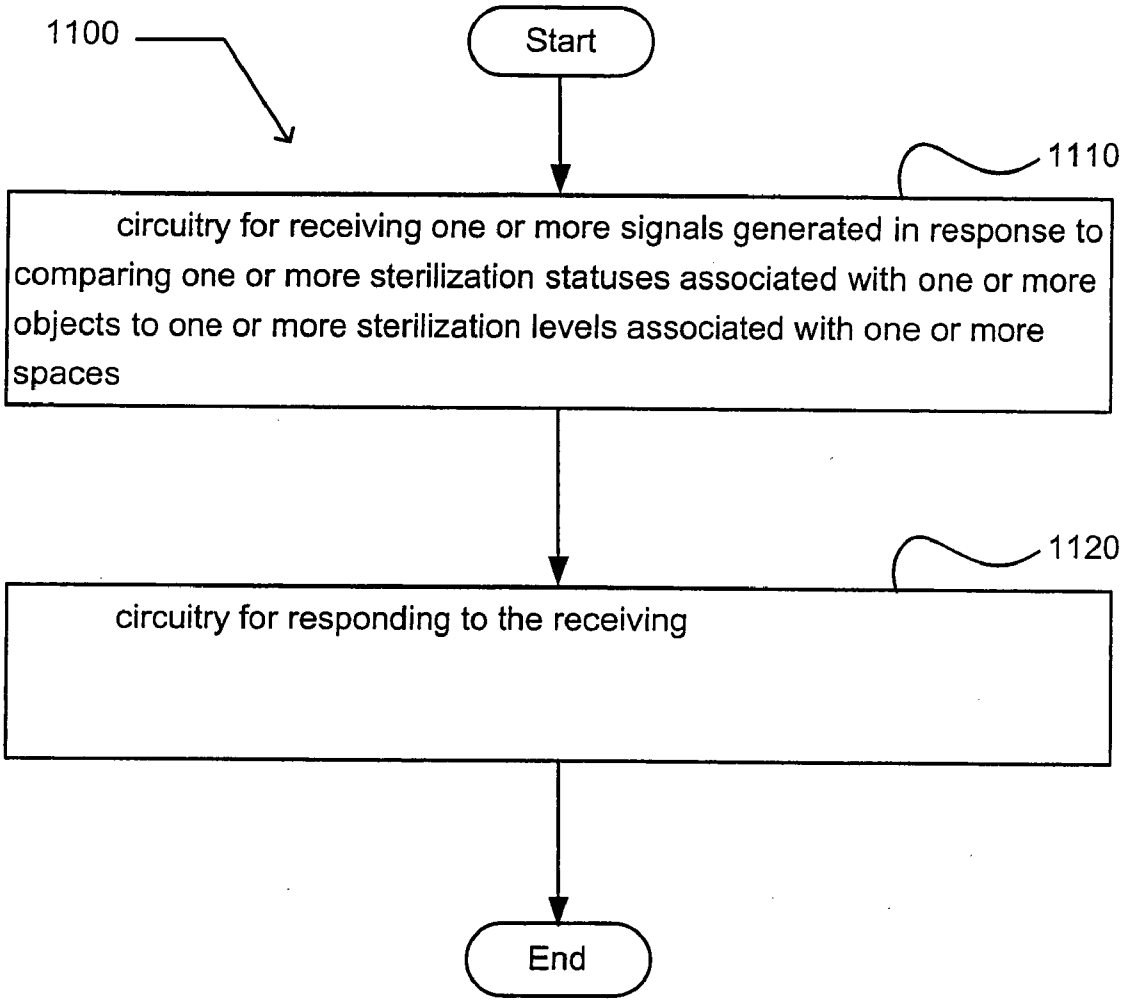

1000
Start
1010
circuitry for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces
1020
circuitry for generating one or more signals in response to the comparing
End

FIG. 11


1100
Start
1110
circuitry for receiving one or more signals generated in response to comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces
1120
circuitry for responding to the receiving
End

METHODS AND SYSTEMS FOR MONITORING STERILIZATION STATUS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present application is related to and claims the benefit of the earliest available effective filing date(s) from the following listed application(s) (the "Related Applications") (e.g., claims earliest available priority dates for other than provisional patent applications or claims benefits under 35 USC § 119(e) for provisional patent applications, for any and all parent, grandparent, great-grandparent, etc. applications of the Related Application(s)).

RELATED APPLICATIONS

[0002] For purposes of the USPTO extra-statutory requirements, the present application constitutes a continuation-in-part of U.S. patent application Ser. No. 11/396,256, entitled STERILIZATION METHODS AND SYSTEMS, naming Edward K. Y. Jung, Royce A. Levien, Robert W. Lord, Mark A. Malamud, John D. Rinaldo, Jr., and Lowell L. Wood, Jr. as inventors, filed 31 Mar. 2006.

[0003] For purposes of the USPTO extra-statutory requirements, the present application also constitutes a continuation-in-part of United States Patent Application No. UNKNOWN, entitled SURVEYING STERILIZER METHODS AND SYSTEMS, naming Roderick A. Hyde, Edward K. Y. Jung, Royce A. Levien, Robert W. Lord, Mark A. Malamud, John D. Rinaldo, Jr., Clarence T. Tegreene, and Lowell L. Wood Jr. as inventors, filed 25 Apr. 2006

[0004] Both of the above-referenced applications are currently co-pending, or are applications of which a currently co-pending application is entitled to the benefit of the filing date.

[0005] The United States Patent Office (USPTO) has published a notice to the effect that the USPTO's computer programs require that patent applicants reference both a serial number and indicate whether an application is a continuation or continuation-in-part. Stephen G. Kunin, *Benefit of Prior-Filed Application,* USPTO Official Gazette Mar. 18, 2003, available at http://www.uspto.gov/web/offices/com/sol/og/2003/week11/patbene.htm. The present applicant entity has provided above a specific reference to the application(s)from which priority is being claimed as recited by statute. Applicant entity understands that the statute is unambiguous in its specific reference language and does not require either a serial number or any characterization, such as "continuation" or "continuation-in-part," for claiming priority to U.S. patent applications. Notwithstanding the foregoing, applicant entity understands that the USPTO's computer programs have certain data entry requirements, and hence applicant entity is designating the present application as a continuation-in-part of its parent applications as set forth above, but expressly points out that such designations are not to be construed in any way as any type of commentary and/or admission as to whether or not the present application contains any new matter in addition to the matter of its parent application(s).

[0006] All subject matter of the Related Applications and of any and all parent, grandparent, great-grandparent, etc. applications of the Related Applications is incorporated herein by reference to the extent such subject matter is not inconsistent herewith.

TECHNICAL FIELD

[0007] The present disclosure relates to methods and systems that may be used for monitoring sterilization status within numerous contexts, such as health-care and manufacturing facilities.

SUMMARY

[0008] In some embodiments, a method is provided that includes comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces and generating one or more signals in response to the comparing. In addition to the foregoing, other method aspects are described in the claims, drawings, and text forming a part of the present disclosure.

[0009] In some embodiments, a method is provided that includes receiving one or more signals generated in response to comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces and responding to the receiving. In addition to the foregoing, other method aspects are described in the claims, drawings, and text forming a part of the present disclosure.

[0010] In some embodiments, a system is provided that includes circuitry for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces and circuitry for generating one or more signals in response to the comparing. In addition to the foregoing, other system aspects are described in the claims, drawings, and text forming a part of the present disclosure.

[0011] In some embodiments, a system is provided that includes circuitry for receiving one or more signals generated in response to comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces and circuitry for responding to the receiving. In addition to the foregoing, other system aspects are described in the claims, drawings, and text forming a part of the present disclosure.

[0012] In some embodiments, a system is provided that includes means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces and means for generating one or more signals in response to the comparing. In addition to the foregoing, other system aspects are described in the claims, drawings, and text forming a part of the present disclosure.

[0013] In some embodiments, a system is provided that includes means for receiving one or more signals generated in response to comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces and means for responding to the receiving. In addition to the foregoing, other system aspects are described in the claims, drawings, and text forming a part of the present disclosure.

[0014] In one or more various aspects, related systems include but are not limited to circuitry and/or programming for effecting the herein-referenced method aspects; the circuitry and/or programming can be virtually any combination

of hardware, software, and/or firmware configured to effect the herein-referenced method aspects depending upon the design choices of the system designer. In addition to the foregoing, other system aspects are described in the claims, drawings, and text forming a part of the present disclosure.

[0015] The foregoing summary is illustrative only and is not intended to be in any way limiting. In addition to the illustrative aspects, embodiments, and features described above, further aspects, embodiments, and features will become apparent by reference to the drawings, claims, and the following detailed description.

BRIEF DESCRIPTION OF THE FIGURES

[0016] FIG. **1** illustrates an example system **100** in which embodiments may be implemented.

[0017] FIG. **2** illustrates an operational flow representing example operations related to monitoring methods.

[0018] FIG. **3** illustrates an alternative embodiment of the example operation flow of FIG. **2**.

[0019] FIG. **4** illustrates an alternative embodiment of the example operation flow of FIG. **2**.

[0020] FIG. **5** illustrates an alternative embodiment of the example operation flow of FIG. **2**.

[0021] FIG. **6** illustrates an operational flow representing example operations related to monitoring methods.

[0022] FIG. **7** illustrates an alternative embodiment of the example operation flow of FIG. **6**.

[0023] FIG. **8** illustrates an alternative embodiment of the example operation flow of FIG. **6**.

[0024] FIG. **9** illustrates an alternative embodiment of the example operation flow of FIG. **6**.

[0025] FIG. **10** illustrates an operational flow representing circuitry related to monitoring systems.

[0026] FIG. **11** illustrates an operational flow representing circuitry related to monitoring systems.

DETAILED DESCRIPTION

[0027] In the following detailed description, reference is made to the accompanying drawings, which form a part hereof. In the drawings, similar symbols typically identify similar components, unless context dictates otherwise. The illustrative embodiments described in the detailed description, drawings, and claims are not meant to be limiting. Other embodiments may be utilized, and other changes may be made, without departing from the spirit or scope of the subject matter presented here.

[0028] While various aspects and embodiments have been disclosed herein, other aspects and embodiments will be apparent to those skilled in the art. The various aspects and embodiments disclosed herein are for purposes of illustration and are not intended to be limiting, with the true scope and spirit being indicated by the following claims.

[0029] FIG. **1** illustrates an example system **100** in which embodiments may be implemented. In some embodiments, the system **100** is operable to provide a method that may be used to monitor sterilization status. In some embodiments, the system **100** is operable to provide a method that may be used to facilitate entry of one or more objects **102** into one or more spaces **104**. In some embodiments, the system **100** is operable to provide a method that may be used to prohibit entry of one or more objects **102** into one or more spaces **104**. In some embodiments, the system **100** is operable to provide a method that may be used to track movement of one or more objects **102**. In some embodiments, the system **100** is operable to provide a method that may be used to record movement of one or more objects **102**. In some embodiments, the system **100** is operable to provide a method that may be used to record one or more sterilization statuses of one or more objects **102**. In some embodiments, the system **100** is operable to provide a method that may be used to promote the sterilization of one or more objects **102**. In some embodiments, the system **100** is operable to provide a method that may be used to promote sterilization of one or more spaces **104**. In some embodiments, the system **100** is operable to provide a method that may be used to prohibit entry of one or more non-sterile objects **102** into one or more spaces **104**. In some embodiments, the system **100** is operable to provide a method that may be used to prohibit entry of one or more non-sterile objects **102** into one or more sterile spaces **104**. In some embodiments, the system **100** is operable to provide a method that may be used to prohibit entry of one or more sterile objects **102** into one or more non-sterile spaces **104**. In some embodiments, the system **100** is operable to provide a method that may be used to prohibit reuse of one or more objects **102**. In some embodiments, the system **100** is operable to provide a method that may be used to promote reuse of one or more objects **102** following sterilization of the one or more objects **102**. In some embodiments, the system **100** is operable to provide a method that may be used to prohibit entry of one or more humans into one or more spaces **104**. In some embodiments, the system **100** is operable to provide a method that may be used to promote entry of one or more humans into one or more spaces **104**. In some embodiments, the system **100** is operable to provide a method that may be used to prohibit entry of one or more humans into one or more spaces **104** that include one or more humans. In some embodiments, the system **100** is operable to provide a method that may be used to promote entry of one or more humans into one or more spaces **104** that include one or more humans.

Comparing Unit

[0030] The system **100** may include one or more comparing units **106**. In some embodiments, one or more comparing units **106** can detect one or more sterilization statuses **108** that are associated with one or more objects **102**. In some embodiments, one or more comparing units **106** can detect one or more sterilization levels **110** that are associated with one or more spaces **104**. In some embodiments, one or more comparing units **106** can compare one or more sterilization statuses **108** that are associated with one or more objects **102** to one or more sterilization levels **110** that are associated with one or more spaces **104**. In some embodiments, the one or more comparing units **106** can determine if one or more sterilization statuses **108** are above one or more values associated with one or more sterilization levels **110**. In some embodiments, the one or more comparing units **106** can determine if one or more sterilization statuses **108** are below one or more values associated with one or more sterilization levels **110**. In some embodiments, the one or more comparing units **106** can determine if one or more sterilization statuses **108** are within a range of values associated with one or more sterilization levels **110**. In some embodiments, multiple sterilization levels **110** may be associated with one or more spaces **104**. Accordingly, in some embodiments, one or more comparing units **106** can compare one or more sterilization statuses **108** associated with one or more objects **102** to one or more sterilization levels **110** associated with one or more

spaces **104**. Comparing units **106** can utilize numerous technologies to detect one or more sterilization statuses **108** associated with one or more objects **102**. For example, in some embodiments, comparing units **106** can detect fluorescent indicators, radio frequency signals, magnetic properties, color changes of chemical indicators, bar codes, and the like. Use of such detection methods are known and have been described (i.e., U.S. Pat. No. 6,485,979: Electronic system for tracking and monitoring articles to be sterilized and associated method, herein incorporated by reference). In some embodiments, comparing units **106** may utilize technologies that include, but are not limited to, motion detectors, infrared detectors, retinal scanners, weight detectors, and the like. In some embodiments, one or more comparing units **106** can change the sterilization status **108** associated with one or more objects **102**. In some embodiments, one or more comparing units **106** can change the sterilization status **108** associated with one or more objects **102** after the one or more objects **102** have been sterilized. Accordingly, in some embodiments, one or more comparing units **106** can change the sterilization status **108** associated with one or more objects **102** that were initially associated with a low sterilization status **108** to a high sterilization status **108** after the one or more objects **102** were sterilized. In some embodiments, one or more comparing units **106** can change the sterilization status **108** associated with one or more objects **102** that were initially associated with a high sterilization status **108** to a low sterilization status **108** after the one or more objects **102** were exposed to a non-sterile space **104**. Accordingly, in some embodiments, one or more comparing units **106** may change one or more sterilization statuses **108** associated with one or more objects **102** to substantially any sterilization status **108**. Comparing units **106** may be configured in numerous ways. Examples of such configurations include, but are not limited to, bracelets, rings, cards, necklaces, badges and the like.

[0031] In some embodiments, one or more comparing units **106** may detect one or more objects **102** with which one or more sterilization statuses **108** have not been associated. Accordingly, in some embodiments, one or more comparing units **106** may generate one or more signals **112** indicating entry, exit and/or substantially any combination thereof of one or more objects **102** into, or out of, one or more spaces **104**. For example, in some embodiments, one or more comparing units **106** may detect entry of an object **102**, such as a mouse, that has not been associated with one or more sterilization statuses **108** into, or out of, one or more spaces **104**. Accordingly, the one or more comparing units **106** may generate one or more signals **112** indicating entry, exit, or substantially any combination thereof of the object **102**, such as the mouse, from the one or more spaces **104**. In some embodiments, the one or more signals **112** may be associated with one or more recording units **116** to record the presence of the one or more objects **102**, such as the mouse, within the one or more spaces **104**. In some embodiments, the one or more signals **112** may be associated with one or more alert units **128** to indicate the presence of the one or more objects **102**, such as the mouse, within the one or more spaces **104**. In some embodiments, one or more comparing units **106** will associate one or more non-sterile statuses **108** to one or more objects **102** that have not previously been associated with one or more sterilization statuses **108**. For example, in some embodiments, one or more comparing units **106** may detect entry of a fly into one or more spaces **104** and may associate one or more non-sterile sterilization statuses **108** with the fly. Accordingly, in some embodiments, one or more comparing units **106** may generate one or more signals **112** indicating entry of a non-sterile fly into one or more spaces **104**. Such signals **112** may be associated with one or more recording units **116** and/or one or more alert units **128** to record and/or indicate the presence of the fly within the one or more spaces **104**.

Sterilization Status

[0032] Numerous criteria may be used to associate one or more sterilization statuses **108** with one or more objects **102**. Such criteria include, but are not limited to, the identity of an object **102**, the length of time that an object **102** was sterilized, the type of sterilizing agent used to sterilize an object **102**, the last time that an object **102** was sterilized, the number of times that an object **102** has been used, the number of times that an object **102** has been sterilized, the frequency with which an object **102** is sterilized, the purpose for which an object **102** is used, the type of contamination to which an object **102** was exposed, and/or substantially any combination thereof. In some embodiments, the sterilization status **108** associated with an object **102** may indicate that the object **102** is non-sterile. In some embodiments, the sterilization status **108** associated with an object **102** may indicate that the object **102** is sterile. In some embodiments, the sterilization status **108** associated with an object **102** may indicate that the object **102** is sterile with regard to one or more types of contamination. In some embodiments, the sterilization status **108** associated with an object **102** may indicate that the object **102** is non-sterile with regard to one or more types of contamination. For example, an object **102** may be sterile with regard to a bacterial contaminant but not sterile with regard to contamination with a prion. In some embodiments, sterile or non-sterile sterilization status **108** may be associated with one or more objects **102** according to a relative scale. For example, in some embodiments, one or more objects **102** may be associated with sterile status if it is thought that there is less than one surviving microorganism per one million objects **102** that have been sterilized (i.e., sterilization assurance level defined by European Standard EN556). In some embodiments, one or more sterilization statuses **108** may be defined and verified through use of known standards and methods, such as those put forth by the International Standards Organization (i.e., ISO 11137 and ISO 11135). In some embodiments, a numerical scale may be used to associate one or more sterilization statuses **108** with one or more objects **102**. For example, in some embodiments, a range of numbers from zero to ten may be used to define one or more sterilization statuses **108** associated with one or more objects **102**. In some embodiments, a range of numbers from zero to one hundred may be used to define one or more sterilization statuses **108** associated with one or more objects **102**. Accordingly, substantially any numerical range may be used to define one or more sterilization statuses **108** associated with one or more objects **102**. In some embodiments, sterilization status **108** may be defined through use of relative terms. Examples of such terms include, but are not limited to, sterile, non-sterile, very low, low, medium, high, very high and the like.

[0033] Numerous technologies may be used to indicate one or more sterilization statuses **108**. Examples of such technologies include, but are not limited to, use of fluorescent indicators, radio frequency signals, magnetic properties, color changes of chemical indicators, and bar codes which may be used to indicate one or more sterilization statuses **108**.

Such technologies are known and have been described (i.e., U.S. Pat. No. 6,485,979: Electronic system for tracking and monitoring articles to be sterilized and associated method, herein incorporated by reference). These, and other, technologies may be configured in numerous ways that include, but are not limited to, bracelets, rings, cards, necklaces, badges and the like. In some embodiments, such technologies may be associated with one or more objects **102**.

Sterilization Level

[0034] Numerous criteria may be used to associate one or more sterilization levels **110** with one or more spaces **104**. Such criteria include, but are not limited to, the length of time that a space **104** was sterilized, the type of sterilizing agent used to sterilize the space **104**, the last time that the space **104** was sterilized, the number of times that the space **104** has been used, the number of times that the space **104** has been sterilized, the frequency with which the space **104** is sterilized, the purpose for which the space **104** is used, the type of contamination to which the space **104** is exposed and/or substantially any combination thereof. In some embodiments, the sterilization level **110** associated with a space **104** may indicate that the space **104** is non-sterile. In some embodiments, the sterilization level **110** associated with a space **104** may indicate that the space **104** is sterile. In some embodiments, the sterilization level **110** associated with a space **104** may indicate that the space **104** is sterile with regard to one or more types of contamination. In some embodiments, the sterilization level **110** associated with a space **104** may indicate that the space **104** is non-sterile with regard to one or more types of contamination. For example, a space **104** may be sterile with regard to a bacterial contaminant but non-sterile with regard to contamination with a prion. In some embodiments, one or more spaces **104** may be associated with one or more sterilization levels **110** according to a standard (i.e., sterilization assurance level defined by European Standard EN556). In some embodiments, one or more sterilization levels **110** can be defined and verified through use of known standards and methods, such as those put forth by the International Standards Organization (i.e., ISO 11137 and ISO 11135).

[0035] In some embodiments, a numerical scale may be used to associate one or more sterilization levels **110** with one or more spaces **104**. For example, in some embodiments, a range of numbers from zero to ten may be used to define one or more sterilization levels **110** associated with one or more spaces **104**. In some embodiments, a range of numbers from zero to one hundred may be used to define one or more sterilization levels **110** associated with one or more spaces **104**. Accordingly, substantially any numerical range may be used to define one or more sterilization levels **110** associated with one or more spaces **104**. In some embodiments, one or more sterilization levels **110** may be defined through use of relative terms. Examples of such relative terms include, but are not limited to, very low, low, high-low, low-medium, medium, high-medium, low-high, high, very high and the like. In some embodiments, one or more compliance ranges can be associated with one or more sterilization levels **110**. For example, in some embodiments, a first compliance range may be associated with one or more first types of contamination and a second compliance range may be associated with one or more second types of contamination. In some embodiments, one compliance range is associated with one sterilization level **110**. In some embodiments, one compliance range is associated with one or more sterilization levels **110**. In some embodiments, a compliance range may be defined to include a minimum value and values above the minimum value. For example, in some embodiments, a space **104** may be associated with sterilization levels **110** having a range of zero to ten and a compliance range having values of seven and above. Accordingly, objects **102** associated with a sterilization status **108** having a value of seven or above may enter into the space **104** in compliance with the compliance range associated with the space **104**. In contrast, objects **102** associated with a sterilization status **108** having a value that is less than seven are outside of the compliance range and entry of such objects **102** into the space **104** is in noncompliance with the compliance range associated with the sterilization level **110**.

[0036] In some embodiments, a compliance range may be defined to include a maximum value and values below the maximum value. For example, in some embodiments, a space **104** may be associated with sterilization levels **110** having a range of zero to ten and a compliance range having values of three and below. Accordingly, objects **102** associated with a sterilization status **108** having a value of three or below may enter into the space **104** in compliance with the compliance range associated with the space **104**. In contrast, objects **102** associated with a sterilization status **108** having a value that is greater than three are outside of the compliance range and entry of such objects **102** into the space **104** is in noncompliance with the compliance range associated with the sterilization level **110**. In some embodiments, a compliance range may be defined to include a minimum value, a maximum value, and values between the minimum and maximum values. For example, in some embodiments, a space **104** may be associated with sterilization levels **110** having a range of zero to ten and a compliance range having values of three to seven. Accordingly, objects **102** associated with a sterilization status **108** having values of three, seven, and values between three and seven, may enter into the space **104** in compliance with the compliance range associated with the space **104**. In contrast, objects **102** associated with a sterilization status **108** having a value that is less than three or greater than seven are outside of the compliance range and entry of such objects **102** into the space **104** is in noncompliance with the compliance range associated with the sterilization level **110**.

[0037] In some embodiments, a compliance range may be defined to include a range of relative values. For example, in some embodiments, a space may be associated with sterilization levels **110** having a range of relative values that are low to high and a compliance range that includes a medium relative value and higher. Accordingly, objects **102** associated with a sterilization status **108** having values of medium or higher may enter into the space **104** in compliance with the compliance range associated with the space **104**. In contrast, objects **102** associated with a sterilization status **108** having relative values that are less than medium are outside of the compliance range and entry of such objects **102** into the space **104** is in noncompliance with the compliance range associated with the sterilization level **110**.

[0038] In some embodiments, a space may be associated with sterilization levels **110** having a range of relative values that are low to high and a compliance range that includes a medium relative value and lower. Accordingly, objects **102** associated with a sterilization status **108** having values of medium or lower may enter into the space **104** in compliance with the compliance range associated with the space **104**. In contrast, objects **102** associated with a sterilization status **108**

having relative values that are greater than medium are outside of the compliance range and entry of such objects **102** into the space **104** is in noncompliance with the compliance range associated with the sterilization level **110**.

[0039] In some embodiments, a compliance range may be defined to include a range of relative values that include a minimum and a maximum. For example, in some embodiments, a space may be associated with sterilization levels **110** having a range of relative values that are low to high and a compliance range that includes low-medium to high-medium relative values. Accordingly, objects **102** associated with a sterilization status **108** having values of low-medium to high-medium may enter into the space **104** in compliance with the compliance range associated with the space **104**. In contrast, objects **102** associated with a sterilization status **108** having relative values that are greater than high-medium or less than low-medium are outside of the compliance range and entry of such objects **102** into the space **104** is in noncompliance with the compliance range associated with the sterilization level **110**.

[0040] Numerous technologies may be used to indicate one or more sterilization levels **110**. Examples of such technologies include, but are not limited to, use of fluorescent indicators, radio frequency signals, magnetic properties, color changes of chemical indicators, and bar codes which may be used to indicate one or more sterilization levels **110**. Such technologies are known and have been described (i.e., U.S. Pat. No. 6,485,979: Electronic system for tracking and monitoring articles to be sterilized and associated method, herein incorporated by reference). These, and other, technologies may be configured in numerous ways that include, but are not limited to, bracelets, rings, cards, necklaces, badges and the like. In some embodiments, such technologies may be associated with one or more spaces **104**.

Space

[0041] System **100** may be used to monitor numerous spaces **104**. Examples of spaces **104** include, but are not limited to, hospitals, pharmaceutical production facilities, food preparation and/or packaging facilities, dental offices, medical offices, operating rooms, veterinary clinics, medical examination rooms, and the like. In some embodiments, a space **104** is a human body. In some embodiments, a space **104** is a non-human body. In some embodiments, one or more sterilization levels **110** may be associated with one or more spaces **104**. For example, a hospital waiting room may be associated with a lower sterilization level **110** than a hospital operating room. In some embodiments, one or more sterilization levels **110** may be associated with one or more spaces **104** based on the identity of the one or more spaces **104**. For example, in some embodiments, the one or more spaces **104** may be part of a human, or non-human, body.

Object

[0042] System **100** may include numerous types of objects **102** that may be used in numerous industries. In some embodiments, the objects **102** are related to the food industry. Examples of such objects **102** include, but are not limited to, food containers, utensils, food service workers, and the like. In some embodiments, the objects **102** are related to the pharmaceutical industry. Examples of such objects **102** include, but are not limited to, pharmaceutical packaging, pharmaceutical workers, machinery, and the like. In some embodiments, the objects **102** are related to the medical industry. Examples of such objects **102** include, but are not limited to, gloves, medical instruments, dental instruments, containers, tools, food, humans, non-human animals, parts of a human such as hands, hospital equipment, and the like.

Signal

[0043] System **100** may include one or more signals **112**. Numerous technologies can be used to produce one or more signals within system **100**. For example, in some embodiments, signals **112** may be radio frequency signals, magnetic signals, infrared signals, digital signals, analog signals, and the like. In some embodiments, one or more receiving units **114** may receive one or more signals **112** from one or more comparing units **106**. In some embodiments, one or more signals **112** are received by one or more recording units **116**.

Receiving Unit

[0044] System **100** may include one or more receiving units **114**. In some embodiments, one or more receiving units **114** receive one or more signals **112** from one or more comparing units **106**. In some embodiments, one or more receiving units **114** communicate with one or more recording units **116**. In some embodiments, one or more receiving units **114** can communicate with one or more responding units **118**. In some embodiments, one or more users **124** may interact with one or more receiving units **114** through user interaction **122**.

Recording Unit

[0045] System **100** may include one or more recording units **116**. In some embodiments, one or more recording units **116** receive one or more signals **112** from one or more comparing units **106**. In some embodiments, one or more recording units **116** communicate with one or more receiving units **114**. In some embodiments, one or more recording units **116** communicate with one or more responding units **118**. In some embodiments, one or more users **124** may interact with one or more recording units **116** through user interaction **122**. In some embodiments, one or more recording units **116** may record one or more spaces **104** where one or more objects **102** have entered. In some embodiments, one or more recording units **116** may record one or more spaces **104** where one or more objects **102** have not entered. In some embodiments, one or more recording units **116** may record when one or more objects **102** have been sterilized. In some embodiments, one or more recording units **116** may record the frequency with which one or more objects **102** have been sterilized. In some embodiments, one or more recording units **116** may record one or more sterilization methods used to sterilize one or more objects **102**. In some embodiments, one or more recording units **116** may record one or more sterilization levels **110** that have been assigned to one or more spaces **104**. In some embodiments, one or more recording units **116** may record changes made to one or more sterilization levels **110** that have been associated with one or more spaces **104**. In some embodiments, one or more recording units **116** may record changes made to one or more sterilization statuses **108** that have been associated with one or more objects **102**. In some embodiments, one or more recording units **116** may record if one or more sterilization statuses **108** associated with one or more objects **102** are within one or more ranges of values associated with one or more sterilization levels **110**. In some embodiments, one or more recording units **116** may

record if one or more sterilization statuses **108** associated with one or more objects **102** are outside one or more ranges of values associated with one or more sterilization levels **110**.

Responding Unit

[0046] System **100** may include one or more responding units **118**. In some embodiments, one or more responding units **118** communicate with one or more receiving units **114**. In some embodiments, one or more responding units **118** communicate with one or more recording units **116**. In some embodiments, one or more users **124** can interact with one or more responding units **118** through user interaction **122**. In some embodiments, one or more responding units **118** can generate one or more control signals **120**. Numerous technologies can be used to generate one or more control signals **120** within system **100**. For example, in some embodiments, control signals **120** may be radio frequency signals, magnetic signals, infrared signals, digital signals, analog signals, and the like. In some embodiments, one or more responding units **118** can change the sterilization status **108** associated with one or more objects **102**. In some embodiments, one or more responding units **118** can change the sterilization level **110** associated with one or more spaces **104**.

Control Signal

[0047] System **100** may include one or more control signals **120**. In some embodiments, one or more control signals **120** are associated with one or more sterilization units **126**. In some embodiments, one or more control signals **120** are associated with one or more recording units **116**. In some embodiments, one or more control signals **120** are associated with one or more alert units **128**. In some embodiments, one or more control signals **120** are associated with one or more control units **130**. In some embodiments, one or more control signals **120** are generated by one or more responding units **118**.

Sterilization Unit

[0048] System **100** may include one or more sterilization units **126**. Numerous types of sterilization units **126** may be used within system **100**. Examples of such sterilization units **126** include, but are not limited to, those that utilize chemicals, ultraviolet light, gamma radiation, sonic radiation, heat, and the like to sterilize an object **102** or space **104**. In some embodiments, one or more sterilization units **126** can sterilize one or more objects **102** in response to a control signal **120** received from one or more responding units **118**. In some embodiments, one or more sterilization units **126** can sterilize one or more spaces **104** in response to a control signal **120** received from one or more responding units **118**. In some embodiments, one or more sterilization units **126** can change the sterilization status **108** of one or more objects **102**.

Alert Unit

[0049] System **100** may include one or more alert units **128**. In some embodiments, one or more alert units **128** can indicate if one or more objects **102** have one or more sterilization statuses **108** that are outside one or more ranges of values associated with one or more sterilization levels **110** associated with one or more spaces **104**. In some embodiments, one or more alert units **128** can indicate if one or more objects **102** have one or more sterilization statuses **108** that are within one or more ranges of values associated with one or more sterilization levels **110** associated with one or more spaces **104**.

Control Unit

[0050] System **100** may include one or more control units **130**. Control units **130** may be coupled to numerous devices to provide for control of the devices by system **100**. For example, in some embodiments, one or more control units **130** can be coupled to one or more door locks to allow one or more objects **102** to enter into, or exit from, one or more spaces **104**.

User Interaction

[0051] The system **100** may provide for user interaction **122**. In some embodiments, a user **124** may interact with one or more responding units **118**, one or more recording units **116**, one or more receiving units **114**, one or more comparing units **106**, one or more sterilization units **126**, one or more alert units **128**, one or more control units **130** and/or substantially any combination thereof. The user **124** can interact through use of numerous technologies. For example, user interaction **122** can occur through use of hardwired methods, such as through use of a keyboard, use of wireless methods, use of the internet, and the like. In some embodiments, a user **124** is human. In some embodiments, a user **124** is not human.

[0052] FIG. **2** illustrates an operational flow **200** representing examples of operations that are related to the performance of a monitoring method. In FIG. **2** and in following figures that include various examples of operations used during performance of the monitoring method, discussion and explanation may be provided with respect to the above-described example of FIG. **1**, and/or with respect to other examples and contexts. However, it should be understood that the operations may be executed in a number of other environments and contexts, and/or modified versions of FIG. **1**. Also, although the various operations are presented in the sequence(s) illustrated, it should be understood that the various operations may be performed in other orders than those which are illustrated, or may be performed concurrently.

[0053] After a start operation, the operational flow **200** includes an operation **210** involving comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces **104**. In some embodiments, one or more comparing units **106** compare one or more sterilization statuses **108** associated with one or more objects **102** to one or more sterilization levels **110** associated with one or more spaces **104**. In some embodiments, one or more comparing units **106** compare one sterilization status **108** to one sterilization level **110**. In some embodiments, one or more comparing units **106** compare one or more sterilization statuses **108** to one sterilization level **110**. In some embodiments, one or more comparing units **106** compare one sterilization status **108** to one or more sterilization levels **110**. In some embodiments, one or more comparing units **106** compare one or more values associated with one or more sterilization statuses **108** to one or more values associated with one or more sterilization levels **110**. In some embodiments, one or more comparing units **106** compare one or more values associated with one or more sterilization statuses **108** to one or more ranges of values associated with one or more sterilization levels **110**. In some embodiments, comparing includes determining if one or more values associated with one or more sterilization statuses

108 are equal to one or more values associated with one or more sterilization levels **110**. In some embodiments, comparing includes determining if one or more values associated with one or more sterilization statuses **108** are greater than one or more values associated with one or more sterilization levels **110**. In some embodiments, comparing includes determining if one or more values associated with one or more sterilization statuses **108** are less than one or more values associated with one or more sterilization levels **110**. In some embodiments, one or more sterilization statuses **108** associated with one or more objects **102** can be designated as being sterile or non-sterile. In some embodiments, one or more sterilization statuses **108** associated with one or more objects **102** can be designated as being sterile for one or more types of contamination and non-sterile for one or more other types of contamination. Accordingly, one or more comparing units **106** can compare one or more sterilization statuses **108** with one or more sterilization levels **110** with regard to one or more types of contamination. In some embodiments, comparing includes determining if one or more values associated with one or more sterilization statuses **108** are within one or more ranges of values associated with one or more sterilization levels **110**. In some embodiments, comparing includes determining if one or more values associated with one or more sterilization statuses **108** are outside of one or more ranges of values associated with one or more sterilization levels **110**. In some embodiments, one or more sterilization statuses **108** may be associated with one or more objects **102** according to one or more sterilization methods that were used to sterilize the one or more objects **102**. In some embodiments, one or more sterilization statuses **108** may be associated with one or more objects **102** according to when the one or more objects **102** were last sterilized. In some embodiments, one or more sterilization statuses **108** may be associated with one or more objects **102** according to a standard, such as those put forth by the International Standards Organization. Accordingly, numerous methods may be used to associate one or more sterilization statuses **108** with one or more objects **102**. In some embodiments, one or more sterilization levels **110** may be associated with one or more spaces **104** according a level of sterility desired for the one or more spaces **104**. For example, an operating room in a hospital may be associated with a higher sterilization level **110** than a waiting room in a hospital. Accordingly, numerous methods and criteria may be used to associate one or more sterilization levels **110** with one or more spaces **104**.

[0054] The operational flow **200** also includes a transmitting operation **220** involving generating one or more signals in response to the comparing. In some embodiments, one or more comparing units **106** may generate one or more signals **112** in response to comparing one or more sterilization statuses **108** associated with one or more objects **102** to one or more sterilization levels **110** associated with one or more spaces **104**. In some embodiments, the one or more signals **112** are received by one or more recording units **116**. In some embodiments, the one or more signals **112** are received by one or more receiving units **114**. In some embodiments, the one or more signals **112** are received by one or more recording units **116** and one or more receiving units **114**.

[0055] FIG. **3** illustrates alternative embodiments of the example operational flow **200** of FIG. **2**. FIG. **3** illustrates example embodiments where the comparing operation **210** may include at least one additional operation. Additional operations may include an operation **302** and/or operation **304**.

[0056] At operation **302**, the comparing operation **210** may include determining if one or more sterilization statuses **108** are within one or more compliance ranges associated with one or more sterilization levels **110**. In some embodiments, one or more comparing units **106** may determine if one or more sterilization statuses **108** are within one or more compliance ranges associated with one or more sterilization levels **110**. In some embodiments, one or more compliance ranges may be associated with one or more sterilization levels **110** according to the level of sterility desired for one or more spaces **104**. For example, in some embodiments, one or more spaces **104**, such as a hospital examination room that includes a human, may be associated with a medium sterilization level **110** that allows entry of an object **102**, such as a human, into the space **104** if the object **102** is associated with a medium or higher sterilization status **108**. However, in some embodiments, one or more spaces **104**, such as in a hospital operating room where a surgery is to take place, may be associated with a high sterilization level **110** that allows entry of an object **102**, such as a human or a surgical instrument, into the space **104** if the object **102** is associated with a high sterilization status **108**. Accordingly, one or more sterilization levels **110** associated with one or more spaces **104** can be selected based on the level of sterility desired for the one or more spaces **104**. In some embodiments, a sterilization level **110** may include a range of values that may be satisfied by one or more sterilization statuses **108** associated with one or more objects **102**. Accordingly, one or more comparing units **106** can compare one or more sterilization statuses **108** with a range of values associated with one or more sterilization levels **110** to determine if the one or more sterilization statuses **108** associated with one or more objects **102** comply with one or more sterilization levels **110** associated with one or more spaces **104**.

[0057] At operation **304**, the comparing operation **210** may include determining if one or more sterilization statuses **108** are outside of one or more compliance ranges associated with one or more sterilization levels **110**. In some embodiments, one or more comparing units **106** may determine if one or more sterilization statuses **108** are outside of one or more compliance ranges associated with one or more sterilization levels **110**. In some embodiments, one or more compliance ranges may be associated with one or more sterilization levels **110** according to the level of sterility desired for one or more spaces **104**. For example, in some embodiments, one or more spaces **104**, such as a hospital examination room that includes a human, may be associated with a medium sterilization level **110** that allows entry of an object **102**, such as a human, into the space **104** if the object **102** is associated with a medium or higher sterilization status **108**. However, in some embodiments, one or more spaces **104**, such as in a hospital operating room where a surgery is to take place, may be associated with a high sterilization level **110** that allows entry of an object **102**, such as a human or a surgical instrument, into the space **104** if the object **102** is associated with a high sterilization status **108**. Accordingly, one or more sterilization levels **110** associated with one or more spaces **104** can be selected based on the level of sterility desired for the one or more spaces **104**. In some embodiments, a sterilization level **110** may include a range of values that may be satisfied by one or more sterilization statuses **108** associated with one or more objects **102**.

Accordingly, one or more comparing units **106** can compare one or more sterilization statuses **108** with a range of values associated with one or more sterilization levels **110** to determine if the one or more sterilization statuses **108** associated with the one or more objects **102** does not comply with the one or more sterilization levels **110** associated with one or more spaces **104**.

[0058] FIG. **4** illustrates alternative embodiments of the example operational flow **200** of FIG. **2**. FIG. **4** illustrates example embodiments where the generating operation **220** may include at least one additional operation. Additional operations may include an operation **402**, **404**, **406**, **408** and/or operation **410**.

[0059] At operation **402**, the generating operation **220** may include generating one or more signals **112** associated with compliance of one or more sterilization statuses **108** with one or more sterilization levels **110**. In some embodiments, one or more comparing units **106** can generate one or more signals **112** associated with compliance of one or more sterilization statuses **108** with one or more sterilization levels **110**. In some embodiments, one or more signals **112** are associated with one or more sterilization statuses **108** having associated values that are greater than one or more values associated with one or more sterilization levels **110**. Accordingly, one or more comparing units **106** can generate one or more signals indicating that the one or more sterilization statuses **108** associated with the one or more objects **102** meet and/or exceed one or more sterilization levels **110** associated with one or more spaces **104**. In some embodiments, one or more signals **112** are associated with one or more sterilization statuses **108** that are within a range of values associated with one or more sterilization levels **110**. Accordingly, one or more comparing units **106** may generate one or more signals **112** indicating that the one or more sterilization statuses **108** meet and/or exceed one or more sterilization levels **110** associated with one or more spaces **104**. In some embodiments, such signals **112** will allow the one or more objects **102** to enter into the one or more spaces **104**. In some embodiments, such signals **112** will allow the one or more objects **102** to exit from the one or more spaces **104**. In some embodiments, such signals **112** may be recorded by one or more recording units **116** to record compliance with one or more sterilization levels **110** or one or more sterilization protocols.

[0060] At operation **404**, the generating operation **220** may include generating one or more signals **112** associated with noncompliance of one or more sterilization statuses **108** with one or more sterilization levels **110**. In some embodiments, one or more comparing units **106** can generate one or more signals **112** associated with noncompliance of one or more sterilization statuses **108** with one or more sterilization levels **110**. In some embodiments, one or more signals **112** are associated with one or more sterilization statuses **108** that do not meet and/or exceed one or more values associated with one or more sterilization levels **110**. Accordingly, one or more comparing units **106** can generate one or more signals **112** indicating that the one or more sterilization statuses **108** associated with the one or more objects **102** do not meet and/or exceed the one or more sterilization levels **110** associated with one or more spaces **104**. In some embodiments, one or more signals **112** are associated with one or more sterilization statuses **108** that are not within a range of values associated with one or more sterilization levels **110**. Accordingly, one or more comparing units **106** can generate one or more signals **112** indicating that the one or more sterilization statuses **108** do not meet and/or exceed one or more ranges of sterilization levels **110** associated with one or more spaces **104**. In some embodiments, such signals **112** will disallow the one or more objects **102** from entering into the one or more spaces **104**. In some embodiments, such signals **112** will disallow the one or more objects **102** from exiting from one or more spaces **104**. In some embodiments, such signals **112** may be recorded by one or more recording units **116** to record noncompliance with one or more sterilization levels **110** or one or more sterilization protocols.

[0061] At operation **406**, the generating operation **220** may include generating one or more signals **112** associated with entry of one or more objects **102** into one or more spaces **104**. In some embodiments, one or more comparing units **106** can generate one or more signals **112** associated with entry of one or more objects **102** into one or more spaces **104**. In some embodiments, one or more comparing units **106** may generate one or more signals **112** associated with entry of one or more objects **102** into one or more spaces **104** after one or more comparing units **106** determine that one or more sterilization statuses **108** associated with one or more objects **102** meet and/or exceed one or more sterilization levels **110** associated with the one or more spaces **104**. In some embodiments, one or more comparing units **106** may generate one or more signals **112** associated with entry of one or more objects **102** into one or more spaces **104** after one or more comparing units **106** determine that one or more sterilization statuses **108** associated with one or more objects **102** are within a range of values associates with one or more sterilization levels **110** associated with the one or more spaces **104**. In some embodiments, one or more comparing units **106** may generate one or more signals **112** associated with disallowing entry of one or more objects **102** into one or more spaces **104** after one or more comparing units **106** determine that one or more sterilization statuses **108** associated with the one or more objects **102** do not meet and/or exceed one or more sterilization levels **110** associated with the one or more spaces **104**. In some embodiments, one or more comparing units **106** may generate one or more signals **112** associated with disallowing entry of one or more objects **102** into one or more spaces **104** after one or more comparing units **106** determine that one or more sterilization statuses **108** associated with one or more objects **102** are not within a range of values associated with one or more sterilization levels **110** that are associated with the one or more spaces **104**. Accordingly, in some embodiments, such a generating operation **220** may be used to allow one or more sterile objects **102**, or one or more objects **102** having high sterilization status **108**, entry into one or more spaces **104** that are sterile or that are associated with a high sterility level **110**. In other embodiments, such a generating operation **220** may be used to prohibit one or more non-sterile objects **102**, or one or more objects **102** having low sterilization status **108**, from entry into one or more spaces **104** that are sterile or that are associated with a high sterility level **110**.

[0062] At operation **408**, the generating operation **220** may include generating one or more signals **112** associated with exit of one or more objects **102** from one or more spaces **104**. In some embodiments, one or more comparing units **106** can generate one or more signals **112** associated with exit of one or more objects **102** from one or more spaces **104**. In some embodiments, one or more comparing units **106** may generate one or more signals **112** associated with exit of one or more objects **102** from one or more spaces **104** after one or more comparing units **106** determine that one or more sterilization

statuses **108** associated with the one or more objects **102** meet and/or exceed one or more sterilization levels **110** associated with one or more spaces **104**. In some embodiments, one or more comparing units **106** may generate one or more signals **112** associated with disallowing exit of one or more objects **102** from one or more spaces **104** after one or more comparing units **106** determine that one or more sterilization statuses **108** associated with one or more objects **102** do not meet and/or exceed one or more sterilization levels **110** associated with one or more spaces **104**. Accordingly, in some embodiments, such a generating operation **220** may be used to allow one or more sterile objects **102**, or one or more objects **102** having high sterilization status **108**, to exit from one or more spaces **104** that are sterile or that are associated with a high sterility level **110**. In other embodiments, such a generating operation **220** may be used to prohibit one or more non-sterile objects **102**, or one or more objects **102** having low sterilization status **108**, from exiting one or more spaces **104** that are non-sterile or that are associated with a low sterility level **110**.

[0063] At operation **410**, the generating operation **220** may include generating one or more signals **112** associated with one or more alert units **128**. In some embodiments, one or more comparing units **106** can generate one or more signals **112** associated with one or more alert units **128**. In some embodiments, one or more comparing units **106** may generate one or more signals **112** associated with one or more alert units **128** after one or more comparing units **106** determine that one or more values associated with one or more sterilization statuses **108** associated with one or more objects **102** meet and/or exceed one or more values associated with one or more sterilization levels **110** associated with one or more spaces **104**. For example, in some embodiments, a space **104** surrounding a patient in a hospital may be associated with a medium sterilization level **110**. An object **102**, such as a physician, that is associated with a medium or higher sterilization status **108** may enter into the space **104** surrounding the patient without causing one or more alert units **128** to indicate noncompliance of the object **102** with the space **104**. For example, one or more alert units **128** may refrain from sounding an alarm, flashing a red light, or other such indicator. In some embodiments, an object **102**, such as a physician, that is associated with a medium or higher sterilization status **108** may enter into the space **104** surrounding the patient and cause one or more alert units **128** to indicate compliance of the object **102** with the space **104**. For example, one or more alert units **128** may flash a green light, activate a voice recording indicating compliance, or other such indicator. In some embodiments, one or more comparing units **106** may generate one or more signals **112** associated with one or more alert units **128** after the one or more comparing units **106** determine that one or more values associated with one or more sterilization statuses **108** associated with the one or more objects **102** do not meet and/or exceed one or more values associated with one or more sterilization levels **110** associated with one or more spaces **104**. For example, in some embodiments, a space **104** surrounding a patient in a hospital may be associated with a medium or higher sterilization level **110**. Entry of an object **102**, such as a physician, that is associated with a low sterilization status **108** into the space **104** surrounding the patient may cause one or more alert units **128** to indicate noncompliance of the object **102** with the space **104**. For example, one or more alert units **128** may sound an alarm, flash a red light, or other such indicator.

[0064] FIG. **5** illustrates alternative embodiments of the example operational flow **200** of FIG. **2**. FIG. **5** illustrates example embodiments where the generating operation **220** may include at least one additional operation. Additional operations may include an operation **502**, **504** and/or operation **506**.

[0065] At operation **502**, the generating operation **220** may include generating one or more signals **112** associated with one or more recording units **116**. In some embodiments, one or more comparing units **106** can generate one or more signals **112** associated with one or more recording units **116**. In some embodiments, one or more signals **112** may be generated that indicate one or more positions of one or more objects **102** about one or more spaces **104**. In some embodiments, such signals **112** may be generated by one or more comparing units **106**. In some embodiments, one or more signals **112** may be recorded by one or more recording units **116**. For example, in some embodiments, the positions of one or more surgical instruments may be tracked as they are moved about one or more spaces **104** in a hospital. In addition, one or more signals **112** indicating the sterilization status **108** of one or more objects **102** may be generated. In some embodiments, such signals **112** may be generated by one or more comparing units **106**. In some embodiments, these one or more signals **112** may be recorded by one or more recording units **116**. For example, in some embodiments, one or more signals **112** associated with one or more sterilization statuses **108** associated with one or more surgical instruments can be recorded by one or more recording units **116**. Accordingly, one or more sterilization statuses **108** associated with one or more objects **102** can be tracked over time and recorded by one or more recording units **116**. In some embodiments, one or more signals **112** indicating the position and sterilization status **108** of one or more objects **102** about one or more spaces **104** can be generated. Such signals **112** can be recorded by one or more recording units **116**. In some embodiments, such recorded signals **112** may be used to monitor and/or report compliance or noncompliance with one or more protocols associated with one or more spaces **104**. For example, a hospital may have an established protocol with regard to sterilization procedures used to sterilize surgical instruments. Records indicating when and where the surgical instruments were sterilized and where the instruments were transported may establish adherence to a sterilization protocol.

[0066] At operation **504**, the generating operation **220** may include generating one or more signals associated with one or more sterilization units. In some embodiments, one or more comparing units **106** can generate one or more signals **112** associated with one or more sterilization units **126**. In some embodiments, one or more signals **112** may be generated that instruct one or more sterilization units **126** to sterilize one or more objects **102**. For example, in some embodiments, one or more signals **112** may be generated that indicate that one or more objects **102** are associated with one or more low sterilization statuses **108** and should be sterilized. Accordingly, one or more signals **112** may be received by one or more sterilization units **126** that will act to sterilize one or more objects **102**. In some embodiments, one or more signals **112** may be generated that indicate that one or more objects **102** are associated with one or more high sterilization statuses **108** and should not be sterilized. Accordingly, one or more signals **112** may be received by one or more sterilization units **126** that will then refrain from sterilizing one or more objects **102**. In some embodiments, one or more comparing units **106** can

change the sterilization status **108** of one or more objects **102**. For example, in some embodiments, one or more comparing units **106** can change the sterilization status **108** of one or more non-sterile objects **102** to sterile after the one or more objects **102** have been sterilized. In some embodiments, one or more sterilization units **126** can change the sterilization status **108** of one or more objects **102**. For example, in some embodiments, one or more sterilization units **126** can change the sterilization status **108** of one or more non-sterile objects **102** to sterile after the one or more objects **102** have been sterilized. For example, in some embodiments, a physician may initially be associated with a medium or higher sterilization status **108** upon entering into a first space **104** that is associated with a medium sterilization level **110** and that includes a first patient. Upon leaving the first space **104** after examining the first patient, one or more comparing units **106** may change the sterilization status **108** associated with the physician to a low sterilization status **108**. In some embodiments, the physician now associated with low sterilization status **108** after examining the first patient may be prohibited from entering into a second space **104** that is associated with a medium sterilization level **110** and that includes a second patient. One or more comparing units **106** may generate one or more signals **112** indicating that one or more sterilization agents need to be applied to the physician. Accordingly, one or more sterilization units **126** may be utilized to apply one or more sterilization agents to the physician. Upon completion of one or more sterilization procedures, the sterilization status **108** associated with the physician may be changed to a medium or higher sterilization status **108**. In some embodiments, the sterilization status **108** associated with the physician may be changed by one or more comparing units **106**, by one or more sterilization units **126**, and/or substantially any combination thereof. The physician may now be allowed entry into the second space **104** as the physician is now associated with a medium or higher sterilization status **108**. Such methods may be utilized with numerous objects **102**.

[0067] At operation **506**, the generating operation **220** may include generating one or more signals **112** associated with one or more control units **130**. In some embodiments, one or more comparing units **106** can generate one or more signals **112** associated with one or more control units **130**. Control units **130** may be configured in numerous ways. Examples of ways in which a control unit **130** may be configured include, but are not limited to, locks, doors, lights, switches, internet connections, transmitters, receivers, and the like. In some embodiments, one or more control signals **120** may be generated that are associated with one or more control units **130** that may be configured as part of a lock or a door. Accordingly, the one or more control signals **120** may control entry or exit from one or more spaces **104** having entry or exit that is controlled by such a lock or door. In some embodiments, one or more control units **130** may be configured as a switch.

[0068] After a start operation, the operational flow **600** includes a receiving operation **610** involving receiving one or more signals generated in response to comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces **104**. In some embodiments, one or more receiving units **114** may receive one or more signals **112** generated in response to comparing one or more sterilization statuses **108** associated with one or more objects **102** to one or more sterilization levels **110** associated with one or more spaces **104**.

[0069] The operational flow **600** also includes a responding operation **620** involving responding to the receiving. In some embodiments, one or more responding units **118** generate one or more control signals **120** associated with receiving one or more signals **112** generated in response to comparing one or more sterilization statuses **108** associated with one or more objects **102** to one or more sterilization levels **110** associated with one or more spaces **104**.

[0070] FIG. **7** illustrates alternative embodiments of the example operational flow **600** of FIG. **6**. FIG. **7** illustrates example embodiments where the receiving operation **610** may include at least one additional operation. Additional operations may include an operation **702**, **704**, **706**, **708** and/or operation **710**.

[0071] At operation **702**, the receiving operation **610** may include receiving one or more signals **112** associated with compliance of one or more sterilization statuses **108** with one or more sterilization levels **110**. In some embodiments, one or more receiving units **114** receive one or more signals **112** associated with compliance of one or more sterilization statuses **108** with one or more sterilization levels **110**. In some embodiments, one or more signals **112** are associated with one or more sterilization statuses **108** having associated values that are greater than one or more values associated with one or more sterilization levels **110**. Accordingly, in some embodiments, one or more receiving units **114** can receive one or more signals indicating that one or more sterilization statuses **108** associated with the one or more objects **102** meet and/or exceed one or more sterilization levels **110** associated with one or more spaces **104**. In some embodiments, one or more signals **112** are associated with one or more sterilization statuses **108** that are within a range of values associated with one or more sterilization levels **110**. Accordingly, one or more receiving units **114** can receive one or more signals **112** indicating that the one or more sterilization statuses **108** meet and/or exceed the one or more sterilization levels **110** associated with one or more spaces **104**. In some embodiments, such signals **112** will allow the one or more objects **102** to enter into the one or more spaces **104**. In some embodiments, such signals **112** will be recorded by one or more recording units **116** to record compliance with one or more sterilization levels **110** or one or more sterilization protocols.

[0072] At operation **704**, the receiving operation **610** may include receiving one or more signals associated with non-compliance of one or more sterilization statuses with one or more sterilization levels. In some embodiments, one or more receiving units **114** can receive one or more signals **112** associated with noncompliance of one or more sterilization statuses **108** with one or more sterilization levels **110**. In some embodiments, one or more signals **112** are associated with one or more sterilization statuses **108** that do not meet and/or exceed one or more values associated with one or more sterilization levels **110**. Accordingly, one or more receiving units **114** can receive one or more signals indicating that the one or more sterilization statuses **108** associated with the one or more objects **102** do not meet and/or exceed the one or more sterilization levels **110** associated with one or more spaces **104**. In some embodiments, one or more signals **112** are associated with one or more sterilization statuses **108** that are not within a range of values associated with one or more sterilization levels **110**. Accordingly, one or more receiving units **114** can receive one or more signals **112** indicating that the one or more sterilization statuses **108** do not meet and/or exceed one or more ranges of sterilization levels **110** associ-

ated with one or more spaces **104**. In some embodiments, such signals **112** will disallow the one or more objects **102** from entering into the one or more spaces **104**. In some embodiments, such signals **112** will be recorded by one or more recording units **116** to record noncompliance with one or more sterilization levels **110** or one or more sterilization protocols.

[0073] At operation **706**, the receiving operation **610** may include receiving one or more signals associated with entry of one or more objects into one or more spaces. In some embodiments, one or more receiving units **114** can receive one or more signals **112** associated with entry of one or more objects **102** into one or more spaces **104**. In some embodiments, one or more receiving units **114** may receive one or more signals **112** associated with entry of one or more objects **102** into one or more spaces **104** from one or more comparing units **106** which determined that the one or more sterilization statuses **108** associated with the one or more objects **102** meet and/or exceed one or more sterilization levels **110** associated with the one or more spaces **104**. In some embodiments, one or more receiving units **114** may receive one or more signals **112** associated with entry of one or more objects **102** into one or more spaces **104** from one or more comparing units **106** which determines that the one or more sterilization statuses **108** associated with the one or more objects **102** are within a range of values associated with one or more sterilization levels **110** that are associated with the one or more spaces **104**. In some embodiments, one or more receiving units **114** may receive one or more signals **112** associated with disallowing entry of one or more objects **102** into one or more spaces **104** from one or more comparing units **106** which determined that the one or more sterilization statuses **108** associated with the one or more objects **102** do not meet and/or exceed one or more sterilization levels **110** associated with the one or more spaces **104**. In some embodiments, one or more receiving units **114** may receive one or more signals **112** associated with disallowing entry of one or more objects **102** into one or more spaces **104** from one or more comparing units **106** which determined that the one or more sterilization statuses **108** associated with the one or more objects **102** are not within a range of values associated with one or more sterilization levels **110** that are associated with the one or more spaces **104**. Accordingly, in some embodiments, such a receiving operation **610** may be used to allow one or more sterile objects **102**, or one or more objects **102** having high sterilization status **108**, entry into one or more spaces **104** that are sterile or that are associated with a high sterility level **110**. In other embodiments, such a receiving operation **610** may be used to prohibit one or more non-sterile objects **102**, or one or more objects **102** having low sterilization status **108**, from entry into one or more spaces **104** that are sterile or that are associated with a high sterility level **110**.

[0074] At operation **708**, the receiving operation **610** may include receiving one or more signals **112** associated with exit of one or more objects **102** from one or more spaces **104**. In some embodiments, one or more receiving units **114** can receive one or more signals **112** associated with exit of one or more objects **102** from one or more spaces **104**. In some embodiments, one or more receiving units **114** may receive one or more signals **112** associated with exit of one or more objects **102** from one or more spaces **104** from one or more comparing units **106** which determine that the one or more sterilization statuses **108** associated with the one or more objects **102** meet and/or exceed one or more sterilization levels **110** associated with one or more spaces **104**. In some embodiments, one or more receiving units **114** may receive one or more signals **112** associated with disallowing exit of one or more objects **102** from one or more spaces **104** from one or more comparing units **106** which determined that one or more sterilization statuses **108** associated with the one or more objects **102** do not meet and/or exceed one or more sterilization levels **110** associated with one or more spaces **104**. Accordingly, in some embodiments, such a receiving operation **610** may be used to allow one or more sterile objects **102**, or one or more objects **102** having high sterilization status **108**, to exit from one or more spaces **104** that are sterile or that are associated with a high sterility level **110**. In other embodiments, such a receiving operation **610** may be used to prohibit one or more non-sterile objects **102**, or one or more objects **102** having low sterilization status **108**, from exiting one or more spaces **104** that are non-sterile or that are associated with a low sterility level **110**.

[0075] At operation **710**, the receiving operation **610** may include receiving one or more signals **112** associated with one or more alert units **128**. In some embodiments, one or more receiving units **114** can receive one or more signals **112** associated with one or more alert units **128**. In some embodiments, one or more receiving units **114** may receive one or more signals **112** associated with one or more alert units **128** from one or more comparing units **106** which determined that one or more values associated with one or more sterilization statuses **108** associated with the one or more objects **102** meet and/or exceed one or more values associated with one or more sterilization levels **110** associated with one or more spaces **104**. For example, in some embodiments, a space **104** surrounding a patient in a hospital may be associated with a medium sterilization level **110**. An object **102**, such as a physician, that is associated with a medium or higher sterilization status **108** may enter into the space **104** surrounding the patient without causing one or more alert units **128** to indicate noncompliance of the object **102** with the space **104**. For example, one or more alert units **128** may refrain from sounding an alarm, flashing a red light, or other such indicator. In some embodiments, an object **102**, such as a physician, that is associated with a medium or higher sterilization status **108** may enter into the space **104** surrounding the patient and cause one or more alert units **128** to indicate compliance of the object **102** with the space **104**. For example, one or more alert units **128** may flash a green light, activate a voice recording indicating compliance, or other such indicator. In some embodiments, one or more receiving units **114** may receive one or more signals **112** associated with one or more alert units **128** from one or more comparing units **106** which determined that one or more values associated with one or more sterilization statuses **108** associated with the one or more objects **102** are less than a value associated with one or more sterilization levels **110** associated with one or more spaces **104**. For example, in some embodiments, a space **104** surrounding a patient in a hospital may be associated with a medium sterilization level **110**. An object **102**, such as a physician, that is associated with a low sterilization status **108** may enter into the space **104** surrounding the patient and cause one or more alert units **128** to indicate noncompliance of the object **102** with the space **104**. For example, one or more alert units **128** may sound an alarm, flash a red light, or other such indicator.

[0076] FIG. **8** illustrates alternative embodiments of the example operational flow **600** of FIG. **6**. FIG. **8** illustrates

example embodiments where the receiving operation **610** may include at least one additional operation. Additional operations may include an operation **802**, **804** and/or operation **806**.

[0077] At operation **802**, the receiving operation **610** may include receiving one or more signals **112** associated with one or more recording units **116**. In some embodiments, one or more receiving units **114** can receive one or more signals **112** associated with one or more recording units **116**. In some embodiments, one or more signals **112** may be received that indicate one or more positions of one or more objects **102** about one or more spaces **104**. In some embodiments, such signals **112** may be received from one or more comparing units **106**. In some embodiments, positions of one or more surgical instruments may be tracked as they are moved about one or more spaces **104** in a hospital. In addition, one or more signals **112** indicating the sterilization status **108** of one or more objects **102** may be received. In some embodiments, such signals **112** may be received by one or more receiving units **114**. In some embodiments, these one or more signals **112** may be recorded by one or more recording units **116**. For example, in some embodiments, one or more signals **112** associated with one or more sterilization statuses **108** associated with one or more surgical instruments can be received and recorded by one or more recording units **116**. Accordingly, one or more sterilization statuses **108** associated with one or more objects **102** can be tracked over time and recorded by one or more recording units **116**. In some embodiments, one or more signals **112** indicating the position and sterilization status **108** of one or more objects **102** about one or more spaces **104** can be received. Such signals **112** can be recorded by one or more recording units **116**. In some embodiments, such recorded signals **112** may be used to monitor and/or report compliance or noncompliance with one or more protocols associated with one or more spaces **104**. For example, a hospital may have an established protocol with regard to sterilization procedures used to sterilize surgical instruments. Records indicating when and where the surgical instruments were sterilized and where the instruments were transported may establish adherence to a sterilization protocol.

[0078] At operation **804**, the receiving operation **610** may include receiving one or more signals associated with one or more sterilization units. In some embodiments, one or more receiving units **114** can receive one or more signals **112** associated with one or more sterilization units **126**. In some embodiments, one or more signals **112** may be received that instruct one or more sterilization units **126** to sterilize one or more objects **102**. For example, in some embodiments, one or more signals **112** may be received that indicate that one or more objects **102** are associated with one or more low sterilization statuses **108** and should be sterilized. Accordingly, one or more signals **112** may be received by one or more sterilization units **126** that will act to sterilize one or more objects **102**. In some embodiments, one or more signals **112** may be received that indicate that one or more objects **102** are associated with one or more high sterilization statuses **108** and should not be sterilized. Accordingly, one or more signals **112** may be received by one or more sterilization units **126** that will then refrain from sterilizing one or more objects **102**.

[0079] At operation **806**, the receiving operation **610** may include receiving one or more signals associated with one or more control units. In some embodiments, one or more receiving units **114** can receive one or more signals **112** associated with one or more control units **130**. Control units **130** may be configured in numerous ways. Examples of ways in which a control unit **130** may be configured include, but are not limited to, locks, doors, lights, switches, internet connections, transmitters, receivers, and the like. In some embodiments, one or more signals **112** may be received that are associated with one or more control units **130** that may be configured as part of a lock or a door. Accordingly, the one or more signals **112** may control entry or exit from one or more spaces **104** having entry or exit that is controlled by such a lock or door. In some embodiments, one or more control units **130** may be configured as a switch.

[0080] FIG. **9** illustrates alternative embodiments of the example operational flow **600** of FIG. **6**. FIG. **9** illustrates example embodiments where the responding operation **620** may include at least one additional operation. Additional operations may include an operation **902**, **904**, **906**, **908**, **910** and/or operation **912**.

[0081] At operation **902**, the responding operation **620** may include generating one or more control signals **120** associated with entry of one or more objects **102** into one or more spaces **104**. In some embodiments, one or more responding units **118** can generate one or more control signals **120** associated with entry of one or more objects **102** into one or more spaces **104**. In some embodiments, one or more responding units **118** may generate one or more control signals **120** associated with entry of one or more objects **102** into one or more spaces **104** after one or more comparing units **106** determine that one or more sterilization statuses **108** associated with the one or more objects **102** meet and/or exceed one or more sterilization levels **110** associated with the one or more spaces **104**. In some embodiments, one or more responding units **118** may generate one or more control signals **120** associated with entry of one or more objects **102** into one or more spaces **104** after one or more comparing units **106** determine that one or more sterilization statuses **108** associated with the one or more objects **102** are within a range of values associated with one or more sterilization levels **110** associated with the one or more spaces **104**. In some embodiments, one or more responding units **118** may generate one or more control signals **120** associated with disallowing entry of one or more objects **102** into one or more spaces **104** after one or more comparing units **106** determine that one or more sterilization statuses **108** associated with the one or more objects **102** do not meet and/or exceed one or more sterilization levels **110** associated with the one or more spaces **104**. In some embodiments, one or more responding units **118** may generate one or more control signals **120** associated with disallowing entry of one or more objects **102** into one or more spaces **104** after one or more comparing units **106** determine that the one or more sterilization statuses **108** associated with the one or more objects **102** are not within a range of values associated with one or more sterilization levels **110** that are associated with the one or more spaces **104**. Accordingly, in some embodiments, such a responding operation **620** may be used to allow one or more sterile objects **102**, or one or more objects **102** having high sterilization status **108**, entry into one or more spaces **104** that are sterile or that are associated with a high sterility level **110**. In other embodiments, such a responding operation **620** may be used to prohibit one or more non-sterile objects **102**, or one or more objects **102** having low sterilization status **108**, from entry into one or more spaces **104** that are sterile or that are associated with a high sterility level **110**.

[0082] At operation **904**, the responding operation **620** may include generating one or more control signals **120** associated with exit of one or more objects **102** from one or more spaces **104**. In some embodiments, one or more responding units **118** can generate one or more control signals **120** associated with exit of one or more objects **102** from one or more spaces **104**. In some embodiments, one or more responding units **118** may generate one or more control signals **120** associated with exit of one or more objects **102** from one or more spaces **104** after one or more comparing units **106** determine that one or more sterilization statuses **108** associated with the one or more objects **102** meet and/or exceed one or more sterilization levels **110** associated with the one or more spaces **104**. In some embodiments, one or more responding units **118** may generate one or more control signals **120** associated with disallowing exit of one or more objects **102** from one or more spaces **104** after one or more comparing units **106** determine that one or more sterilization statuses **108** associated with the one or more objects **102** do not meet and/or exceed one or more sterilization levels **110** associated with one or more spaces **104**. Accordingly, in some embodiments, such a responding operation **620** may be used to allow one or more sterile objects **102**, or one or more objects **102** having high sterilization status **108**, to exit from one or more spaces **104** that are sterile or that are associated with a high sterility level **110**. In other embodiments, such a responding operation **620** may be used to prohibit one or more non-sterile objects **102**, or one or more objects **102** having low sterilization status **108**, from exiting one or more spaces **104** that are non-sterile or that are associated with a low sterility level **110**.

[0083] At operation **906**, the responding operation **620** may include generating one or more control signals **120** associated with one or more alert units **128**. In some embodiments, one or more responding units **118** can generate one or more control signals **120** associated with one or more alert units **128**. In some embodiments, one or more responding units **118** may generate one or more control signals **120** associated with one or more alert units **128** after one or more comparing units **106** determine that one or more values associated with one or more sterilization statuses **108** associated with one or more objects **102** meet and/or exceed one or more values associated with one or more sterilization levels **110** associated with one or more spaces **104**. For example, in some embodiments, a space **104** surrounding a patient in a hospital may be associated with a medium sterilization level **110**. An object **102**, such as a physician, that is associated with a medium or higher sterilization status **108** may enter into the space **104** surrounding the patient without causing one or more alert units **128** to indicate noncompliance of the object **102** with the space **104**. For example, one or more alert units **128** may refrain from sounding an alarm, flashing a red light, or other such indicator. In some embodiments, an object **102**, such as a physician, that is associated with a medium or higher sterilization status **108** may enter into the space **104** surrounding the patient and cause one or more alert units **128** to indicate compliance of the object **102** with the space **104**. For example, one or more alert units **128** may flash a green light, activate a voice recording indicating compliance, or other such indicator. In some embodiments, one or more responding units **118** may generate one or more control signals **120** associated with one or more alert units **128** after one or more comparing units **106** determine that one or more values associated with one or more sterilization statuses **108** associated with the one or more objects **102** do not meet and/or exceed one or more values associated with one or more sterilization levels **110** associated with one or more spaces **104**. For example, in some embodiments, a space **104** surrounding a patient in a hospital may be associated with a medium sterilization level **110**. Entry of an object **102**, such as a physician, that is associated with a low sterilization status **108** into the space **104** surrounding the patient may cause one or more alert units **128** to indicate noncompliance of the object **102** with the space **104**. For example, one or more alert units **128** may sound an alarm, flash a red light, or other such indicator.

[0084] At operation **908**, the responding operation **620** may include generating one or more control signals **120** associated with one or more recording units **116**. In some embodiments, one or more responding units **118** can generate one or more control signals **120** associated with one or more recording units **116**. In some embodiments, one or more control signals **120** may be generated that indicate one or more positions of one or more objects **102** about one or more spaces **104**. In some embodiments, such control signals **120** may be generated by one or more responding units **118**. In some embodiments, the one or more control signals **120** may be recorded by one or more recording units **116**. For example, in some embodiments, the positions of one or more surgical instruments may be tracked as they are moved about one or more spaces **104**, such as in a hospital. In addition, one or more control signals **120** indicating the sterilization status **108** of one or more objects **102** may be generated. In some embodiments, such control signals **120** may be generated by one or more responding units **118**. In some embodiments, these one or more control signals **120** may be recorded by one or more recording units **116**. For example, in some embodiments, one or more control signals **120** associated with one or more sterilization statuses **108** associated with one or more surgical instruments can be generated by one or more responding units **118** and recorded by one or more recording units **116**. Accordingly, one or more sterilization statuses **108** associated with one or more objects **102** can be tracked over time and recorded by one or more recording units **116**. In some embodiments, one or more control signals **120** indicating the position and sterilization status **108** of one or more objects **102** about one or more spaces **104** can be generated. Such control signals **120** can be generated by one or more responding units **118** and recorded by one or more recording units **116**. In some embodiments, such recorded control signals **120** may be used to monitor and/or report compliance or noncompliance with one or more protocols associated with one or more spaces **104**. For example, a hospital may have an established protocol with regard to sterilization procedures used to sterilize surgical instruments. Records indicating when and where the surgical instruments were sterilized and where the instruments were transported may establish adherence to a sterilization protocol.

[0085] At operation **910**, the responding operation **620** may include generating one or more control signals **120** associated with one or more sterilization units **126**. In some embodiments, one or more responding units **118** can generate one or more control signals **120** associated with one or more sterilization units **126**. In some embodiments, one or more control signals **120** may be generated that instruct one or more sterilization units **126** to sterilize one or more objects **102**. For example, in some embodiments, one or more control signals **120** may be generated that indicate that one or more objects **102** are associated with one or more low sterilization statuses **108** and should be sterilized. Accordingly, the one or more

control signals **120** may be received by one or more sterilization units **126** that will act to sterilize the one or more objects **102**. In some embodiments, one or more control signals **120** may be generated that indicate that one or more objects **102** are associated with one or more high sterilization statuses **108** and should not be sterilized. Accordingly, the one or more control signals **120** may be received by one or more sterilization units **126** that will then refrain from sterilizing the one or more objects **102**. In some embodiments, one or more responding units **118** can change the sterilization status **108** of one or more objects **102**. For example, in some embodiments, one or more responding units **118** can change the sterilization status **108** of one or more non-sterile objects **102** to sterile after the one or more objects **102** have been sterilized. In some embodiments, one or more sterilization units **126** can change the sterilization status **108** of one or more objects **102**. For example, in some embodiments, one or more sterilization units **126** can change the sterilization status **108** of one or more non-sterile objects **102** to sterile after the one or more objects **102** have been sterilized. For example, in some embodiments, a physician may initially be associated with a medium or higher sterilization status **108** upon entering into a first space **104** that is associated with a medium sterilization level **110** and that includes a first patient. Upon leaving the first space **104** after examining the first patient, one or more responding units **118** may change the sterilization status **108** associated with the physician to a low sterilization status **108**. In some embodiments, the physician now associated with low sterilization status **108** after examining the first patient may be prohibited from entering into a second space **104** that is associated with a medium sterilization level **110** and that includes a second patient. One or more responding units **118** may generate one or more control signals **120** indicating that one or more sterilization agents need to be applied to the physician. Accordingly, one or more sterilization units **126** may be utilized to apply one or more sterilization agents to the physician. Upon completion of one or more sterilization procedures, the sterilization status **108** associated with the physician may be changed to a medium or higher sterilization status **108**. In some embodiments, the sterilization status **108** associated with the physician may be changed by one or more responding units **118**, by one or more sterilization units **126**, and/or substantially any combination thereof. The physician may now be allowed entry into the second space **104** as the physician is now associated with a medium or higher sterilization status **108**. Such methods may be utilized with numerous objects **102**.

[0086] At operation **912**, the responding operation **620** may include generating one or more control signals **120** associated with one or more control units **130**. In some embodiments, one or more responding units **118** can generate one or more control signals **120** associated with one or more control units **130**. Control units **130** may be configured in numerous ways. Examples of ways in which a control unit **130** may be configured include, but are not limited to, locks, doors, lights, switches, internet connections, transmitters, receivers, and the like. In some embodiments, one or more control signals **120** may be generated that are associated with one or more control units **130** that may be configured as part of a lock or a door. Accordingly, the one or more control signals **120** may control entry or exit from one or more spaces **104** having entry or exit that is controlled by such a lock or door. In some embodiments, one or more control units **130** may be configured as a switch.

[0087] FIG. **10** illustrates an operational flow **1000** representing examples of operations that are related to the performance of a monitoring system. In FIG. **10** and in following figures that include various examples of operations used during performance of the sterilization method, discussion and explanation may be provided with respect to the above-described example of FIG. **1**, and/or with respect to other examples and contexts. However, it should be understood that the operations may be executed in a number of other environments and contexts, and/or modified versions of FIG. **1**. Also, although the various operations are presented in the sequence(s) illustrated, it should be understood that the various operations may be performed in other orders than those which are illustrated, or may be performed concurrently.

[0088] After a start operation, the operational flow **1000** includes an operation **1010** involving circuitry for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces **104**. In some embodiments, the circuitry may be used for determining if the one or more sterilization statuses **108** are within one or more compliance ranges associated with one or more sterilization levels **110**. In some embodiments, the circuitry may be used for determining if the one or more sterilization statuses **108** are outside of one or more compliance ranges associated with one or more sterilization levels **110**.

[0089] The operational flow **1000** also includes an operation **1020** involving circuitry for generating one or more signals in response to the comparing. In some embodiments, the circuitry may be used for generating one or more signals **112** associated with compliance of one or more sterilization statuses **108** with one or more sterilization levels **110**. In some embodiments, the circuitry may be used for generating one or more signals **112** associated with noncompliance of one or more sterilization statuses **108** with one or more sterilization levels **110**. In some embodiments, the circuitry may be used for generating one or more signals **112** associated with entry of one or more objects **102** into one or more spaces **104**. In some embodiments, the circuitry may be used for generating one or more signals **112** associated with exit of one or more objects **102** from one or more spaces **104**. In some embodiments, the circuitry may be used for generating one or more signals **112** associated with one or more alert units **128**. In some embodiments, the circuitry may be used for generating one or more signals **112** associated with one or more recording units **116**. In some embodiments, the circuitry may be used for generating one or more signals **112** associated with one or more sterilization units **126**. In some embodiments, the circuitry may be used for generating one or more signals **112** associated with one or more control units **130**.

[0090] FIG. **11** illustrates an operational flow **1100** representing examples of operations that are related to the performance of a monitoring system. While FIG. **11** illustrates various examples of operations used during performance of the sterilization method, discussion and explanation may be provided with respect to the above-described example of FIG. **1**, and/or with respect to other examples and contexts. However, it should be understood that the operations may be executed in a number of other environments and contexts, and/or modified versions of FIG. **1**. Also, although the various operations are presented in the sequence(s) illustrated, it should be understood that the various operations may be performed in other orders than those which are illustrated, or may be performed concurrently.

[0091] After a start operation, the operational flow **1100** includes an operation **1110** involving circuitry for receiving one or more signals generated in response to comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces **104**. In some embodiments, the circuitry may be used for receiving one or more signals **112** associated with compliance of one or more sterilization statuses **108** with one or more sterilization levels **110**. In some embodiments, the circuitry may be used for receiving the one or more signals **112** associated with noncompliance of one or more sterilization statuses **108** with one or more sterilization levels **110**. In some embodiments, the circuitry may be used for receiving one or more signals **112** associated with entry of one or more objects **102** into one or more spaces **104**. In some embodiments, the circuitry may be used for receiving one or more signals **112** associated with exit of one or more objects **102** from one or more spaces **104**. In some embodiments, the circuitry may be used for receiving one or more signals **112** associated with one or more alert units **128**. In some embodiments, the circuitry may be used for receiving the one or more signals **112** associated with one or more recording units **116**. In some embodiments, the circuitry may be used for receiving one or more signals **112** associated with one or more sterilization units **126**. In some embodiments, the circuitry may be used for receiving one or more signals **112** associated with one or more control units **130**.

[0092] The operational flow **1100** also includes an operation **1120** involving circuitry for responding to the receiving. In some embodiments, the circuitry may be used for generating one or more control signals **120** associated with entry of one or more objects **102** into one or more spaces **104**. In some embodiments, the circuitry may be used for generating one or more control signals **120** associated with exit of one or more objects **102** from one or more spaces **104**. In some embodiments, the circuitry may be used for generating one or more control signals **120** associated with one or more alert units **128**. In some embodiments, the circuitry may be used for generating one or more control signals **120** associated with one or more recording units **116**. In some embodiments, the circuitry may be used for generating one or more control signals **120** associated with one or more sterilization units **126**. In some embodiments, the circuitry may be used for generating one or more control signals **120** associated with one or more control units **130**.

[0093] With respect to the use of substantially any plural and/or singular terms herein, those having skill in the art can translate from the plural to the singular and/or from the singular to the plural as is appropriate to the context and/or application. The various singular/plural permutations are not expressly set forth herein for sake of clarity.

[0094] While particular aspects of the present subject matter described herein have been shown and described, it will be apparent to those skilled in the art that, based upon the teachings herein, changes and modifications may be made without departing from the subject matter described herein and its broader aspects and, therefore, the appended claims are to encompass within their scope all such changes and modifications as are within the true spirit and scope of the subject matter described herein. Furthermore, it is to be understood that the invention is defined by the appended claims. It will be understood by those within the art that, in general, terms used herein, and especially in the appended claims (e.g., bodies of the appended claims) are generally intended as "open" terms (e.g., the term "including" should be interpreted as "including but not limited to," the term "having" should be interpreted as "having at least," the term "includes" should be interpreted as "includes but is not limited to," etc.). It will be further understood by those within the art that if a specific number of an introduced claim recitation is intended, such an intent will be explicitly recited in the claim, and in the absence of such recitation no such intent is present. For example, as an aid to understanding, the following appended claims may contain usage of the introductory phrases "at least one" and "one or more" to introduce claim recitations. However, the use of such phrases should not be construed to imply that the introduction of a claim recitation by the indefinite articles "a" or "an" limits any particular claim containing such introduced claim recitation to inventions containing only one such recitation, even when the same claim includes the introductory phrases "one or more" or "at least one" and indefinite articles such as "a" or "an" (e.g., "a" and/or "an" should typically be interpreted to mean "at least one" or "one or more"); the same holds true for the use of definite articles used to introduce claim recitations. In addition, even if a specific number of an introduced claim recitation is explicitly recited, those skilled in the art will recognize that such recitation should typically be interpreted to mean at least the recited number (e.g., the bare recitation of "two recitations," without other modifiers, typically means at least two recitations, or two or more recitations). Furthermore, in those instances where a convention analogous to "at least one of A, B, and C, etc." is used, in general such a construction is intended in the sense one having skill in the art would understand the convention (e.g., "a system having at least one of A, B, and C" would include but not be limited to systems that have A alone, B alone, C alone, A and B together, A and C together, B and C together, and/or A, B, and C together, etc.). In those instances where a convention analogous to "at least one of A, B, or C, etc." is used, in general such a construction is intended in the sense one having skill in the art would understand the convention (e.g., "a system having at least one of A, B, or C" would include but not be limited to systems that have A alone, B alone, C alone, A and B together, A and C together, B and C together, and/or A, B, and C together, etc.). It will be further understood by those within the art that virtually any disjunctive word and/or phrase presenting two or more alternative terms, whether in the description, claims, or drawings, should be understood to contemplate the possibilities of including one of the terms, either of the terms, or both terms. For example, the phrase "A or B" will be understood to include the possibilities of "A" or "B" or "A and B."

[0095] Those having skill in the art will recognize that the state of the art has progressed to the point where there is little distinction left between hardware and software implementations of aspects of systems; the use of hardware or software is generally (but not always, in that in certain contexts the choice between hardware and software can become significant) a design choice representing cost vs. efficiency tradeoffs. Those having skill in the art will appreciate that there are various vehicles by which processes and/or systems and/or other technologies described herein can be effected (e.g., hardware, software, and/or firmware), and that the preferred vehicle will vary with the context in which the processes and/or systems and/or other technologies are deployed. For example, if an implementer determines that speed and accuracy are paramount, the implementer may opt for a mainly hardware and/or firmware vehicle; alternatively,

if flexibility is paramount, the implementer may opt for a mainly software implementation; or, yet again alternatively, the implementer may opt for some combination of hardware, software, and/or firmware. Hence, there are several possible vehicles by which the processes and/or devices and/or other technologies described herein may be effected, none of which is inherently superior to the other in that any vehicle to be utilized is a choice dependent upon the context in which the vehicle will be deployed and the specific concerns (e.g., speed, flexibility, or predictability) of the implementer, any of which may vary. Those skilled in the art will recognize that optical aspects of implementations will typically employ optically-oriented hardware, software, and or firmware.

[0096] The foregoing detailed description has set forth various embodiments of the devices and/or processes via the use of block diagrams, flowcharts, and/or examples. Insofar as such block diagrams, flowcharts, and/or examples contain one or more functions and/or operations, it will be understood by those within the art that each function and/or operation within such block diagrams, flowcharts, or examples can be implemented, individually and/or collectively, by a wide range of hardware, software, firmware, or virtually any combination thereof. In one embodiment, several portions of the subject matter described herein may be implemented via Application Specific Integrated Circuits (ASICs), Field Programmable Gate Arrays (FPGAs), digital signal processors (DSPs), or other integrated formats. However, those skilled in the art will recognize that some aspects of the embodiments disclosed herein, in whole or in part, can be equivalently implemented in integrated circuits, as one or more computer programs running on one or more computers (e.g., as one or more programs running on one or more computer systems), as one or more programs running on one or more processors (e.g., as one or more programs running on one or more microprocessors), as firmware, or as virtually any combination thereof, and that designing the circuitry and/or writing the code for the software and or firmware would be well within the skill of one of skill in the art in light of this disclosure. In addition, those skilled in the art will appreciate that the mechanisms of the subject matter described herein are capable of being distributed as a program product in a variety of forms, and that an illustrative embodiment of the subject matter described herein applies regardless of the particular type of signal bearing medium used to actually carry out the distribution. Examples of a signal bearing medium include, but are not limited to, the following: a recordable type medium such as a floppy disk, a hard disk drive, a Compact Disc (CD), a Digital Video Disk (DVD), a digital tape, a computer memory, etc.; and a transmission type medium such as a digital and/or an analog communication medium (e.g., a fiber optic cable, a waveguide, a wired communications link, a wireless communication link, etc.).

[0097] In a general sense, those skilled in the art will recognize that the various embodiments described herein can be implemented, individually and/or collectively, by various types of electromechanical systems having a wide range of electrical components such as hardware, software, firmware, or virtually any combination thereof; and a wide range of components that may impart mechanical force or motion such as rigid bodies, spring or torsional bodies, hydraulics, and electro-magnetically actuated devices, or virtually any combination thereof. Consequently, as used herein "electro-mechanical system" includes, but is not limited to, electrical circuitry operably coupled with a transducer (e.g., an actuator, a motor, a piezoelectric crystal, etc.), electrical circuitry having at least one discrete electrical circuit, electrical circuitry having at least one integrated circuit, electrical circuitry having at least one application specific integrated circuit, electrical circuitry forming a general purpose computing device configured by a computer program (e.g., a general purpose computer configured by a computer program which at least partially carries out processes and/or devices described herein, or a microprocessor configured by a computer program which at least partially carries out processes and/or devices described herein), electrical circuitry forming a memory device (e.g., forms of random access memory), electrical circuitry forming a communications device (e.g., a modem, communications switch, or optical-electrical equipment), and any non-electrical analog thereto, such as optical or other analogs. Those skilled in the art will also appreciate that examples of electromechanical systems include but are not limited to a variety of consumer electronics systems, as well as other systems such as motorized transport systems, factory automation systems, security systems, and communication/computing systems. Those skilled in the art will recognize that electromechanical as used herein is not necessarily limited to a system that has both electrical and mechanical actuation except as context may dictate otherwise.

[0098] In a general sense, those skilled in the art will recognize that the various aspects described herein which can be implemented, individually and/or collectively, by a wide range of hardware, software, firmware, or any combination thereof can be viewed as being composed of various types of "electrical circuitry." Consequently, as used herein "electrical circuitry" includes, but is not limited to, electrical circuitry having at least one discrete electrical circuit, electrical circuitry having at least one integrated circuit, electrical circuitry having at least one application specific integrated circuit, electrical circuitry forming a general purpose computing device configured by a computer program (e.g., a general purpose computer configured by a computer program which at least partially carries out processes and/or devices described herein, or a microprocessor configured by a computer program which at least partially carries out processes and/or devices described herein), electrical circuitry forming a memory device (e.g., forms of random access memory), and/or electrical circuitry forming a communications device (e.g., a modem, communications switch, or optical-electrical equipment). Those having skill in the art will recognize that the subject matter described herein may be implemented in an analog or digital fashion or some combination thereof.

[0099] Those skilled in the art will recognize that it is common within the art to implement devices and/or processes and/or systems in the fashion(s) set forth herein, and thereafter use engineering and/or business practices to integrate such implemented devices and/or processes and/or systems into more comprehensive devices and/or processes and/or systems. That is, at least a portion of the devices and/or processes and/or systems described herein can be integrated into other devices and/or processes and/or systems via a reasonable amount of experimentation. Those having skill in the art will recognize that examples of such other devices and/or processes and/or systems might include—as appropriate to context and application—all or part of devices and/or processes and/or systems of (a) an air conveyance (e.g., an airplane, rocket, hovercraft, helicopter, etc.), (b) a ground conveyance (e.g., a car, truck, locomotive, tank, armored personnel carrier, etc.), (c) a building (e.g., a home, warehouse, office, etc.),

(d) an appliance (e.g., a refrigerator, a washing machine, a dryer, etc.), (e) a communications system (e.g., a networked system, a telephone system, a voice-over IP system, etc.), (f) a business entity (e.g., an Internet Service Provider (ISP) entity such as Comcast Cable, Quest, Southwestern Bell, etc), or (g) a wired/wireless services entity such as Sprint, Cingular, Nextel, etc.), etc.

[0100] Although user **124** is shown/described herein as a single illustrated figure, those skilled in the art will appreciate that user **124** may be representative of a human user, a robotic user (e.g., computational entity), and/or substantially any combination thereof (e.g., a user may be assisted by one or more robotic agents). In addition, user **124**, as set forth herein, although shown as a single entity may in fact be composed of two or more entities. Those skilled in the art will appreciate that, in general, the same may be said of "sender" and/or other entity-oriented terms as such terms are used herein.

[0101] The herein described subject matter sometimes illustrates different components contained within, or connected with, different other components. It is to be understood that such depicted architectures are merely exemplary, and that in fact many other architectures can be implemented which achieve the same functionality. In a conceptual sense, any arrangement of components to achieve the same functionality is effectively "associated" such that the desired functionality is achieved. Hence, any two components herein combined to achieve a particular functionality can be seen as "associated with" each other such that the desired functionality is achieved, irrespective of architectures or intermedial components. Likewise, any two components so associated can also be viewed as being "operably connected", or "operably coupled", to each other to achieve the desired functionality, and any two components capable of being so associated and/or in communication with each other can also be viewed as being "operably couplable", to each other to achieve the desired functionality. Specific examples of operably couplable include but are not limited to physically mateable and/or physically interacting components and/or wirelessly interactable and/or wirelessly interacting components and/or logically interacting and/or logically interactable components.

1.-**28**. (canceled)

29. A system comprising:

means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces; and

means for generating one or more signals in response to the comparing means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces.

30. (canceled)

31. The system of claim **29**, wherein the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for determining if the one or more sterilization statuses associated with the one or more objects are within one or more compliance ranges associated with the one or more sterilization levels associated with the one or more spaces.

32. The system of claim **29**, wherein the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for determining if the one or more sterilization statuses associated with the one or more objects are outside of one or more compliance ranges associated with the one or more sterilization levels associated with the one or more spaces.

33. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals associated with compliance of the one or more sterilization statuses associated with the one or more objects with the one or more sterilization levels associated with the one or more spaces.

34. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals associated with noncompliance of the one or more sterilization statuses associated with the one or more objects with the one or more sterilization levels associated with the one or more spaces.

35. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals associated with entry of the one or more objects into the one or more spaces.

36. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals associated with exit of the one or more objects from the one or more spaces.

37. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals configured to allow entry of the one or more objects into the one or more spaces if the one or more sterilization statuses associated with the one or more objects are within one or more compliance ranges associated with the one or more sterilization levels associated with the one or more spaces.

38. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals configured to disallow entry of the one or more objects into the one or more spaces if the one or more sterilization statuses associated with the one or more objects are outside of

one or more compliance ranges associated with the one or more sterilization levels associated with the one or more spaces.

39. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals configured to allow exit of the one or more objects from the one or more spaces if the one or more sterilization statuses associated with the one or more objects are within one or more compliance ranges associated with the one or more sterilization levels associated with the one or more spaces.

40. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals configured to disallow exit of the one or more objects from the one or more spaces if the one or more sterilization statuses associated with the one or more objects are outside of one or more compliance ranges associated with the one or more sterilization levels associated with the one or more spaces.

41. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals associated with one or more alert units.

42. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals configured to activate one or more alert units if the one or more sterilization statuses associated with the one or more objects are outside of one or more compliance ranges associated with the one or more sterilization levels associated with the one or more spaces.

43. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals configured to activate one or more alert units if the one or more sterilization statuses associated with the one or more objects are within one or more compliance ranges associated with the one or more sterilization levels associated with the one or more spaces.

44. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals associated with one or more recording units.

45. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals associated with one or more sterilization units.

46. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals configured to activate one or more sterilization units to sterilize the one or more objects if the one or more sterilization statuses associated with the one or more objects are outside one or more ranges of the one or more sterilization levels associated with the one or more spaces.

47. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals associated with one or more control units.

48. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals configured to instruct one or more control units to allow entry of the one or more objects into the one or more spaces if the one or more sterilization statuses associated with the one or more objects are within one or more ranges of the one or more sterilization levels associated with the one or more spaces.

49. The system of claim **29**, wherein the means for generating one or more signals in response to the means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces comprises:

means for generating the one or more signals configured to instruct one or more control units to disallow entry of the one or more objects into the one or more spaces if the one or more sterilization statuses associated with the one or more objects are outside of one or more ranges of the one or more sterilization levels associated with the one or more spaces.

50. A system comprising:

means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces; and

means for generating one or more signals configured to regulate entry of the one or more objects into the one or more spaces or to regulate exit of the one or more objects

from the one or more spaces in response to the means for comparing one or more sterilization statuses associated with the one or more objects to the one or more sterilization levels associated with the one or more spaces.

51. A system comprising:

means for comparing one or more sterilization statuses associated with one or more objects to one or more sterilization levels associated with one or more spaces; and

means for generating one or more signals configured to regulate entry of the one or more objects into the one or more spaces or to regulate exit of the one or more objects from the one or more spaces and to activate one or more alert units in response to the means for comparing one or more sterilization statuses associated with the one or more objects to the one or more sterilization levels associated with the one or more spaces.

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