invalid sensor data **38** being evaluated and further processed within the environment **10** (FIG. **1**).

[0036] In an embodiment, an amount of sensor data **38** evaluated by the verification component **36**C is initially set by a user **14**, or the like. Computer system **20** (e.g., control component **36**A) can dynamically adjust the type and/or amount of sensor data **38** evaluated by the verification component **36**C according to one or more operating variables of the asset **12**. For example, control component **36**A can direct verification component **36**C to evaluate sensor data **38** acquired from an older sensing device, which may be approaching an end of its operating life, or a sensing device exhibiting one or more indications of possibly failing (e.g., weaker signals, wider variance in measurements, and/or the like) more frequently than that of a newer sensing device. Furthermore, when asset **12** is subjected to a significant event, such as a storm, maintenance, a collision, and/or the like, control component **36**A can direct verification component **36**C to temporarily evaluate an increased amount of the sensor data **38** to determine whether the various I/O devices **40** are properly operating. Similarly, asset **12** may include one or more inoperable sensing devices in a group of complementary sensing devices. In this case, sensor data **38** acquired from an operating sensing device in the group of complementary sensing devices may have an increased importance. As a result, control component **36**A can direct verification component **36**C to increase a frequency with which the sensor data **38** acquired from the operating sensing device is evaluated until the inoperable sensing device(s) recommences operating/are replaced.

[0037] In process **304**, computer system **20** (e.g., verification component **36**C) can determine a desired quality assessment approach to utilize in evaluating the sensor data **38**. For example, management data **34** can include a set of quality parameters and/or evaluation policies **34**A, which computer system **20** can utilize to autonomously or semi-autonomously identify and implement the desired quality assessment approach from a plurality of possible quality assessment approaches. The set of parameters and/or policies **34**A can be included when the asset **12** is deployed for operation. Furthermore, the set of parameters and/or policies can be updated after deployment, e.g., by a user **14**. In this case, the user **14** can manage updating the set of parameters and/or policies **34**A during locally performed maintenance of the asset **12** and/or using a remote connection. When updated remotely, a user **14** can use any type of communications protocol to perform the update, such as a browser-based human machine interface (HMI) in communication with the asset **12** using a direct connect, remote network access, and/or the like, communications protocol.

[0038] The set of parameters and policies **34**A can include any combination of rules and parameters for identifying and implementing a desired quality assessment approach. For example, the parameters and policies **34**A for a particular sensor can define a single quality assessment approach that is always used. Alternatively, the set of parameters and policies **34**A for a particular sensor can define multiple quality assessment approaches that can be selected according to other relevant parameters that affect the operation and/or evaluation of the sensing device. For example, the relevant parameters can include: ambient conditions, including temperature, lighting (e.g., day/night, ambient/artificial, etc.), vibration, motion/location of the asset **12**, and/or the like; additional sensor data **38** available, including data concurrently/recently acquired by one or more complementary sensing devices, which can be used to confirm/corroborate the sensor data **38**; availability of sufficient historical sensor data for the sensing device; other actions/processes occurring on the asset **12**; a relevance of data available for the assessment (e.g., data currency/timeliness, specificity, etc.), and/or the like. The parameters and policies **34**A can define the desired quality assessment approach based on the relevant parameters.

[0039] In process **306**, computer system **20** (e.g., verification component **36**C) can perform the data quality assessment of the new sensor data **38** using the desired quality assessment approach. To this extent, computer system **20** can use other related sensor data **38** and/or relevant management data **34** to evaluate the quality of the new sensor data **38**. For example, computer system **20** can use data corresponding to a set of sensor attributes **34**B of the sensing device. In an embodiment, the sensor attributes **34**B can be obtained and installed on computer system **20** from a data store corresponding to the sensing device. For example, a sensing device can comprise data associated therewith (e.g., present on the sensing device, provided with the sensing device, and/or available from a manufacturer of the sensing device or other source), which defines various sensor-specific characteristics of the sensing device. The characteristics can include various sensor performance characteristics such as, for example, operating parameters of the sensing device, details on interfacing with the sensing device, an acceptable range of data values, etc. In a more particular embodiment, the characteristics are stored on a sensing device using a data format standard, such as SensorML, which computer system **20** can automatically acquire from a newly connected sensing device and process to configure and interface with the sensing device. Additionally, computer system **20** can obtain data corresponding to the operational status of a related device operated in conjunction with the sensing device (e.g., an emitter operated in conjunction with a sensor).

[0040] When available, computer system **20** also can use historical data **34**C in order to perform a data quality assessment of the new sensor data **38**. The historical data **34**C can include, for example: data previously acquired by the same sensing device; data previously acquired by a similar sensing device (e.g., a previously utilized sensor device); sensor data previously and/or concurrently acquired by other related sensing devices; and/or the like. The historical data **34**C can comprise raw sensor data **38** and/or data summarizing the historical sensor data **38** (e.g., statistics generated from previous sensor data, relationship information for different sensor data, and/or the like).

[0041] Regardless, computer system **20** can evaluate the new sensor data **38** using the desired quality assessment approach in conjunction with the applicable sensor attributes **34**B and/or historical data **34**C. The evaluation can include one or more of any type of data comparisons and/or analyses, such as, for example: determination of value(s) outside of a valid range; value(s) changing too rapidly; value(s) conflicting with other data; and/or the like. In an embodiment, the evaluation can indicate whether the sensor data **38** is valid or suspect. In another embodiment, a suspect evaluation can comprise two or more possible results, such as, for example, untrustworthy (e.g., value(s) are questionable, but not certain they are invalid), invalid (e.g., value(s) were determined to be inaccurate or acquired using an errant process), unconfirmed (e.g., insufficient data to evaluate the accuracy), and/or the