a power source of the environment within which the asset **12** is deployed. For example, illustrative power generation components include a wind turbine, a set of solar cells, a wave/current energy harvester, and/or the like. As is known, the amount of power generated by various power generation components is entirely dependent on the ambient conditions, and therefore can vary based on time of day, time of year, physical location (e.g., latitude), weather, and/or the like. To this extent, the power system **42** can include sufficient power storage to continue to operate the components of the asset **12** while power generation capabilities are lower, and can include a generation solution that is capable of re-charging the power storage while also operating the components of the asset **12**.

[0029] In general, computer system **20** can evaluate the sensor data **40** provided by the I/O devices **40**, and manage operation of the set of I/O devices **40** accordingly. To this extent, FIG. **2** shows an illustrative computer system **20** comprising various components **36**A-**36**E according to an embodiment. As illustrated, computer system **20** can comprise a control component **36**A, which is configured to receive information from various other components **36**B-**36**E and control operation of some or all of the various other components **36**B-**36**E, such as components **36**B-**36**D. In particular, the control component **36**A can receive one or more of: raw sensor data **38** corresponding to one or more attributes of the environment of the corresponding asset **12** (FIG. **1**) from an acquisition component **36**B; verified sensor data **38** and/or verification results from a verification component **36**C; data corresponding to power generation/availability from a power component **36**E; measurement data from an application component **36**D; and/or the like. Control component **36**A can process the data to manage the operation of one or more of the components **36**B-**36**D, including providing data corresponding to any error (e.g., warning or alarm) conditions, if present, using application component **36**D.

[0030] Acquisition component **36**B can acquire sensor data **38** from various I/O devices **40** (FIG. **1**) using any solution. For example, acquisition component **36**B can be configured to read and/or request sensor data **38** from one or more of the I/O devices **40** according to a predetermined acquisition period. The acquisition period can vary based on the particular I/O device **40** and/or a mode of operation for the asset **12** (FIG. **1**). In order to acquire the sensor data **38**, acquisition component **36**B can manage the operation of one or more of the I/O devices **40**. For example, acquisition component **36**B can regulate power provided to the I/O devices **40** so that valid sensor data is provided by the I/O devices **40** without having the I/O devices **40** unnecessarily consume a significant amount of power.

[0031] Similarly, power component **36**E can obtain power data corresponding to an amount of power currently available, an amount of power being generated, and/or the like, from the power system **42** (FIG. **1**). Additionally, the power data can include data corresponding to an amount of power currently being consumed by operating some or all of the various I/O devices **40**. Computer system **20** can store the power data as management data **34** using any solution, e.g., records in a table, for further processing.

[0032] Furthermore, application component **36**D can process sensor data **38**, receive and/or send data from/to various I/O devices **40**, adjust operation of one or more I/O devices **40**, and/or the like according to an application to which the asset **12** is directed. For example, the application component **36**D can process the sensor data **38** to evaluate one or more attributes of the environment in which the asset **12** is located. In response to the processing, the application component **36**D can store the sensor data **38** and/or processed data derived therefrom as management data **34** for later processing, adjust operation of one or more of the I/O devices **40**, transmit an alert message in response to one or more of the evaluated attributes, and/or the like. To this extent, application component **36**D can send and/or receive data to one or more remote systems, such as a system of a user **14** (FIG. **1**) or a third party **16** (FIG. **1**), using any solution. Application component **36**D can send/receive data according to a predetermined schedule, in response to one or more events (e.g., an alarm condition), and/or the like.

[0033] When an I/O device **40** is malfunctioning, the sensor data **38** received by acquisition component **36**B can be invalid. In this case, control component **36**A can adjust operation of acquisition component **36**B to stop operating the I/O device **40**, stop acquiring data from the I/O device **40**, and/or the like. Similarly, control component **36**A can adjust operation of application component **36**D to stop processing of the invalid sensor data **38** prior to application component **36**D initiating one or more actions with respect to the invalid sensor data **38**.

[0034] To this extent, sensor data **38** acquired by acquisition component **36**B can be evaluated by a verification component **36**C prior to processing by control component **36**A and/or application component **36**D. Verification component **36**C can evaluate all of the sensor data **38** acquired for one or more of the I/O devices **40** or evaluate a sampling (e.g., according to a predetermined or dynamically calculated frequency) of the sensor data **38** acquired for one or more of the I/O devices **40**. Verification component **36**C can use management data **34** (FIG. **1**) to perform the evaluation using any solution. For example, the management data **34** can include data **34**A regarding the quality parameters and/or evaluation policies corresponding to an I/O device **40**, data **34**B regarding one or more attributes of the I/O device **40**, historical data **34**C acquired by the I/O device **40**, and/or the like. Verification component **36**C can utilize some or all of the management data **34** to evaluate the quality of the sensor data **38**.

[0035] FIG. **3** shows an illustrative flow diagram for evaluating sensor data **38** acquired on an asset **12** (FIG. **1**), which can be implemented by computer system **20** (e.g., control component **36**A and/or verification component **36**C), according to an embodiment. Referring to FIGS. **2** and **3**, in process **302**, computer system **20** (e.g., verification component **36**C) obtains new sensor data **38** for evaluation. As discussed herein, verification component **36**C can evaluate all sensor data **38** acquired by the computer system **20** for a sensing device, a subset (e.g., a sampling) of the sensor data **38** acquired for a sensing device, and/or the like. Similarly, verification component **36**C can evaluate some or all of the sensor data **38** acquired for all sensing devices or a subset of the sensing devices included on the asset **12**. Furthermore, verification component **36**C can implement an approach for concurrently evaluating the sensor data **38** acquired from multiple sensing devices (e.g., a group of complementary sensing devices), an approach for evaluating the sensor data **38** acquired by a single sensing device, and/or the like. The amount of sensor data **38** evaluated by the verification component **36**C can be selected according to the risk (e.g., physical risk, cost/ease of correction, cost/likelihood of unnecessary action, risk associated with inaction, and/or the like) of