maintenance time and expense. For example, additional inspections may be performed on the seals for the openings and the integrity of the wires. Also, wires and seals may be replaced at times during the life of the aircraft. Consequently, the time and cost of maintenance may be increased due to use of the wires.

SUMMARY

In a particular embodiment, a sensor device includes a capacitive probe including a first conductor and a second conductor. The sensor device also includes a radio to generate a signal based on a measurement associated with the capacitive probe and to provide the signal to the first conductor for transmission using the capacitor probe as a transmission antenna.

In another particular embodiment, a method includes generating sensor data using a capacitive probe including a first conductor and a second conductor. The method also includes transmitting a signal based on the sensor data using the capacitive probe as a transmission antenna.

In another particular embodiment, a vehicle includes a fuel tank and a sensor unit located in the fuel tank. The sensor unit includes a capacitive probe including a first conductor and a second conductor. The sensor unit further includes a radio to generate a signal based on a measurement associated with the capacitive probe and to provide the signal to the first conductor for transmission using the capacitive probe as a transmission antenna.

In one illustrative embodiment, an apparatus includes a sensor collector configured to send a number of wireless power signals to a group of sensor units. The sensor controller is further configured to send a number of wireless data collection signals to the group of sensor units after the number of wireless power signals have been sent to the group of sensor units. The sensor collector is still further configured to receive sensor data in a number of wireless response signals from the group of sensor units.

In another illustrative embodiment, an aircraft fuel sensor system includes a group of sensor units, a wireless system, and a sensor controller. The group of sensor units is