**THE ZIGBEE PROTOCOL**

Zigbee Alliance is a group of companies specializing in semiconductors, software development, and original equipment manufacturers (OEMs) that has created the Zigbee standard. The Zigbee Alliance has brought together many member companies, from semiconducting industry and software developers to original equipment manufacturers (OEMs). They have come together under the Zigbee standard to ensure inexpensive, low-cost, low-power, and low-data rate networking. Devices of Zigbee devices operate in the industrial, scientific, and medical (ISM) radio bandwidths: 868 MHz in Europe, 915 MHz in North America, and 2.4 GHz worldwide. [2] The ZigBee standard operates for the IEEE 802.15.4 physical radio specifications, which describe the physical layer (PHY) protocol functions and the interactions with the medium access control layer (MAC) layer. Moreover, it also defines the minimum hardware-level requirements, such as the receiver sensitivity and the transmitter output power. The modulations used in IEEE 802.15.4 are BPSK (binary phase shift keying), ASK (amplitude shift keying), and O-QPSK (offset quadrature phase shift keying). [2] One of the major benefits of using ZigBee are its low cost, which allows for wide-range deployed applications in wireless monitoring and control. ZigBee devices can activate (pass from sleep mode to active mode) in a very quick time (15 milliseconds) so that they have been allotted with more sleep—most of the time. This makes it possible to save power and thus, providing them long-lasting battery life, typically lasting for years.

**HARDWARE IMPLEMENTATION**

Comment [A1]: The original sentence describes that Zigbee standard and Zigbee Alliance are two different charters that unite to form a cluster of companies. There are many errors in this statement: (a) has been come is an incorrect tense; the more appropriate phrase can be has been developed/was developed by; (b) they made up is incorrect; the better phrasing can be Zigbee is a group of companies in the fields of.

Comment [A2]: The hyphen in between is not necessary. Low is an adjective to the noun power; a compound low-power is oftentimes an adjective. For example, low-power system.

Comment [A3]: For brevity, we can remove this portion and substitute with a conjunction.

Comment [A4]: One is a singular indefinite pronoun in this case; it should agree with a singular verb.

Comment [A5]: Units are usually abbreviated when reporting numerical information.
Master–slave is a model for a communication protocol that involves one device or a process (known as the master) controlling one or more devices or processes (known as the slaves). However, after the master–slave association was set up, the direction of control will always be from the master to the slaves. In the System built in the hardware components of ZigBee devices comprise a created it has two parts respecting to this model: a Master module and a Slave module.

The slave system device will be placed in the field and will measure count humidity, temperature, and light intensity data, which are then sent. This data will be transmitted over the air, with using ZigBee, to the master system device. Upon receipt, the master device sends the transmitted data to the personal computer (PC) for real-time processing, where it will be processed in real...