MILTON CONTRACTING

IoT

(INTERNET OF THINGS)

IoT (Internet of things)

The concept of basically connecting any device with an on / off switch, analogue signal, digital signal, data signal to the cloud/ site data system (and/or to each other). This includes everything from wearable devices, process control instruments, condition monitoring and almost anything else you can think of. This also applies to components of machines, for example motors, pumps, temperature sensor of any fixed plant or installation.

Why IoT for Mining/ Agriculture/ Utilities

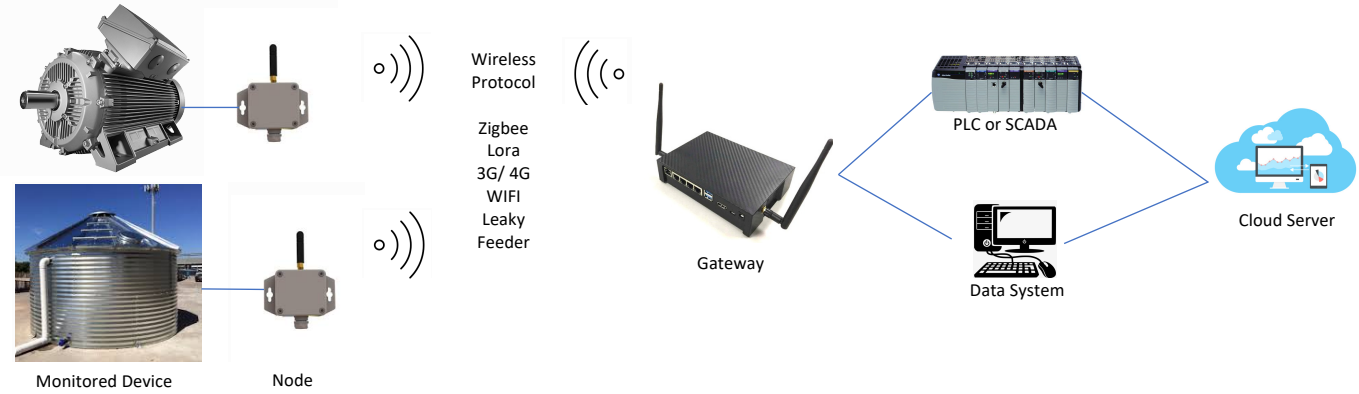
IoT using various protocols (Lora, Zigbee, Leaky Feeder, 4G) can transmit packets of data long distances (up to 20km) reducing the need to run additional communications infrastructure. The units can be packaged with batteries and solar panels to allow rapid deployment i.e. hours rather than days or weeks to connect to field devices. The system is easily expanded, modified or even relocated to a new site.

Application Examples

Mining UG - ventilation monitoring, small remote battery powered units can be placed in mine development areas to measure air flow, temperature, humidity and pressure. This information can be transported to the surface over the leaky feeder system reducing long communication cable runs, no power requirements, can be rapidly deployed and moved as the mine evolves or new ventilation models required

Utilities - Bore fields/ Pump Stations, monitoring be added to motors, water lines or control rooms to measure almost any parameter, coupled with battery and solar panels the systems can be installed rapidly for additional data, such as motor condition monitor, water flow and pressure along long pipe runs in remote areas.

Agriculture – Monitor vineyards or orchards from a central location to the boundaries of the plantation. Easily measure soil moisture, canopy temperature, humidity, water flow and valve positions. This information can be used to reduce the water being used, highlight burst pipes i.e. pump on but no water flow & reduce energy by ‘watering on demand’



Benefits

- Rapid installation
- No additional power or communications infrastructure
- Open protocols allowing integration into existing SCADA or PLC systems

Additional Features

- Create mesh networks to extend data transmission distances
- Use multiple wireless protocols on the one system
- Drop and drag software dashboards to allow quick & simple system design

Examples of Installed Devices

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