

# BLE-IoT-Gwy

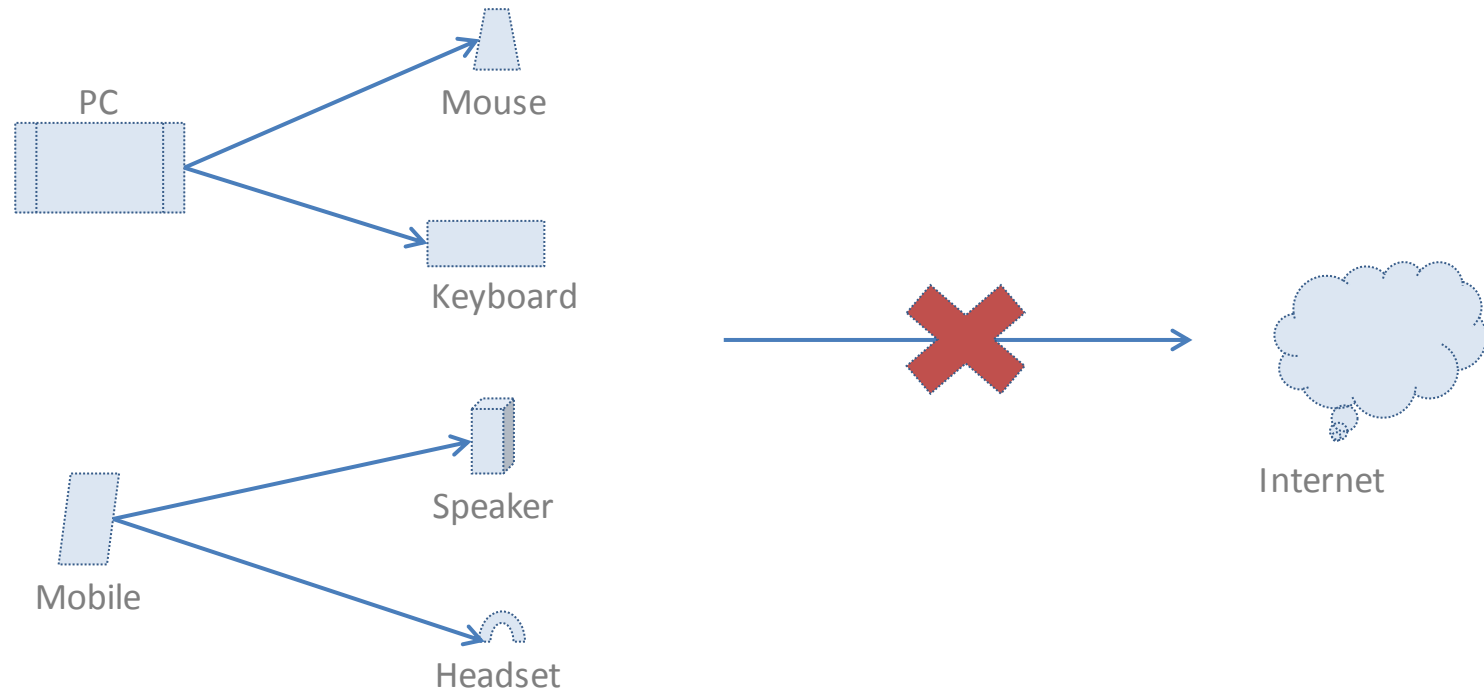
2018/11/23 Written

2019/01/02 Updated

# Introduction

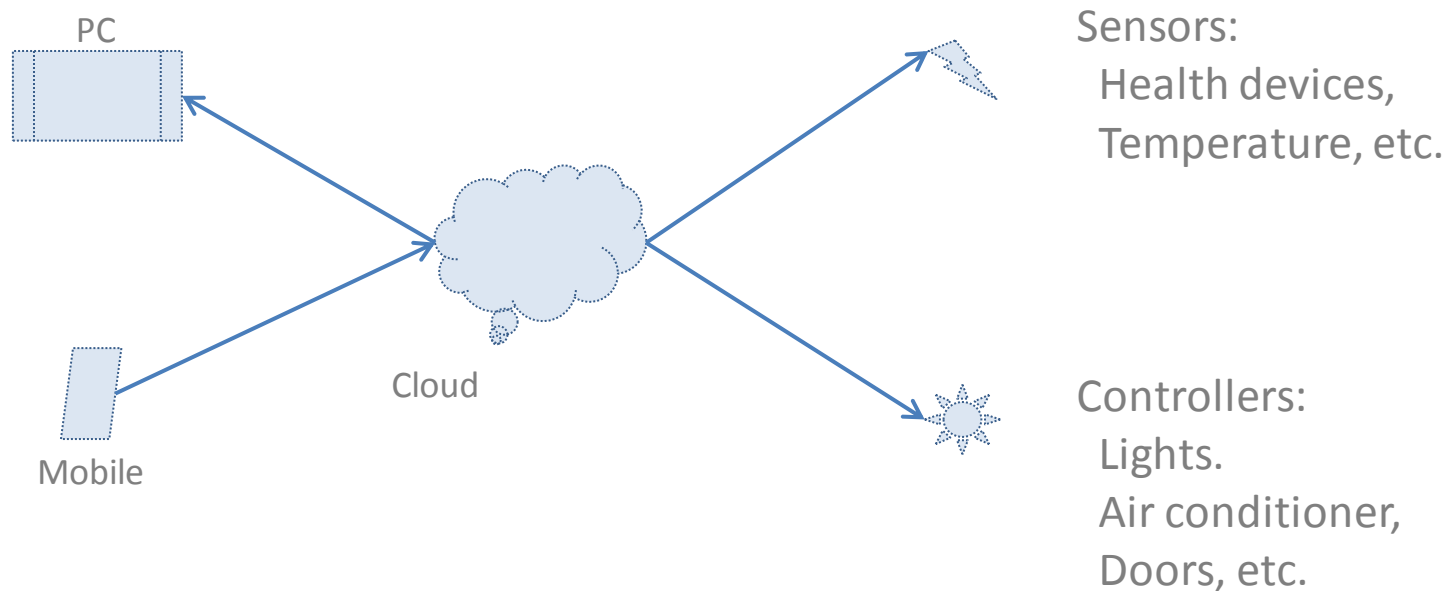
- BLE – Bluetooth Low Energy
  - Radio technology with range of a few meters
  - Bluetooth 4.0+ or once called Bluetooth Smart
- IoT – Internet of Things
  - Devices having Internet connectivity
- This set of slides shows how BLE-capable devices can be part of Internet

# Bluetooth Classic (before 2010)



Closed connection between user and device

# Bluetooth LE (since 2010)

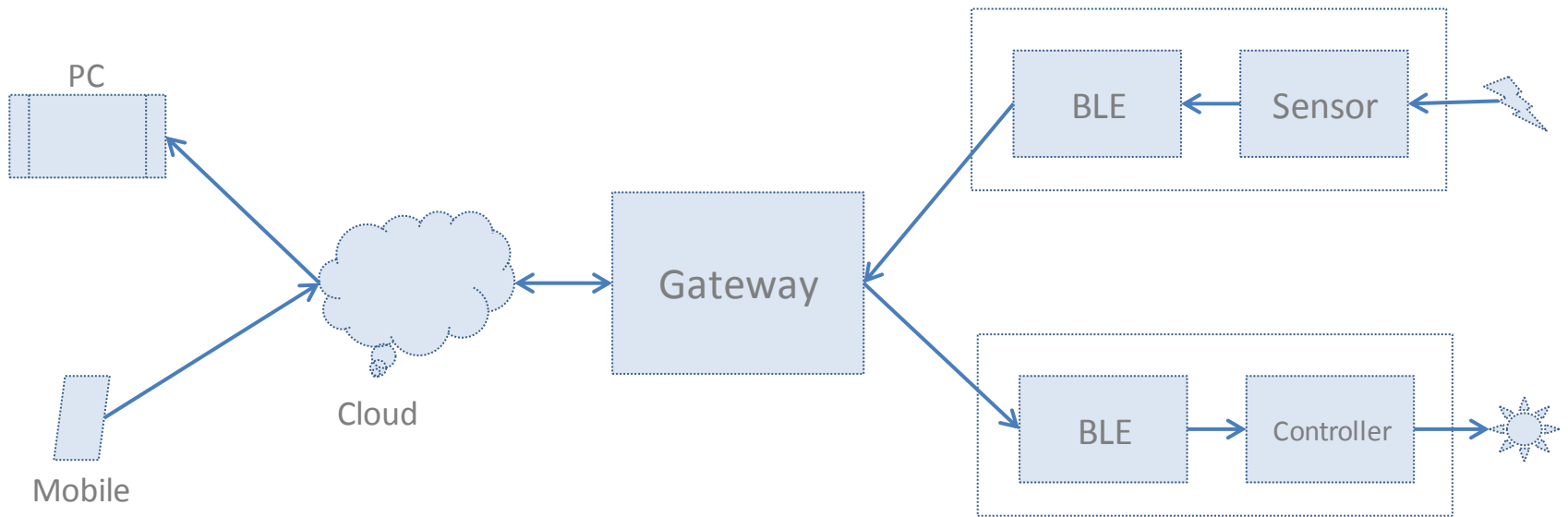


Requires Internet connection to be useful

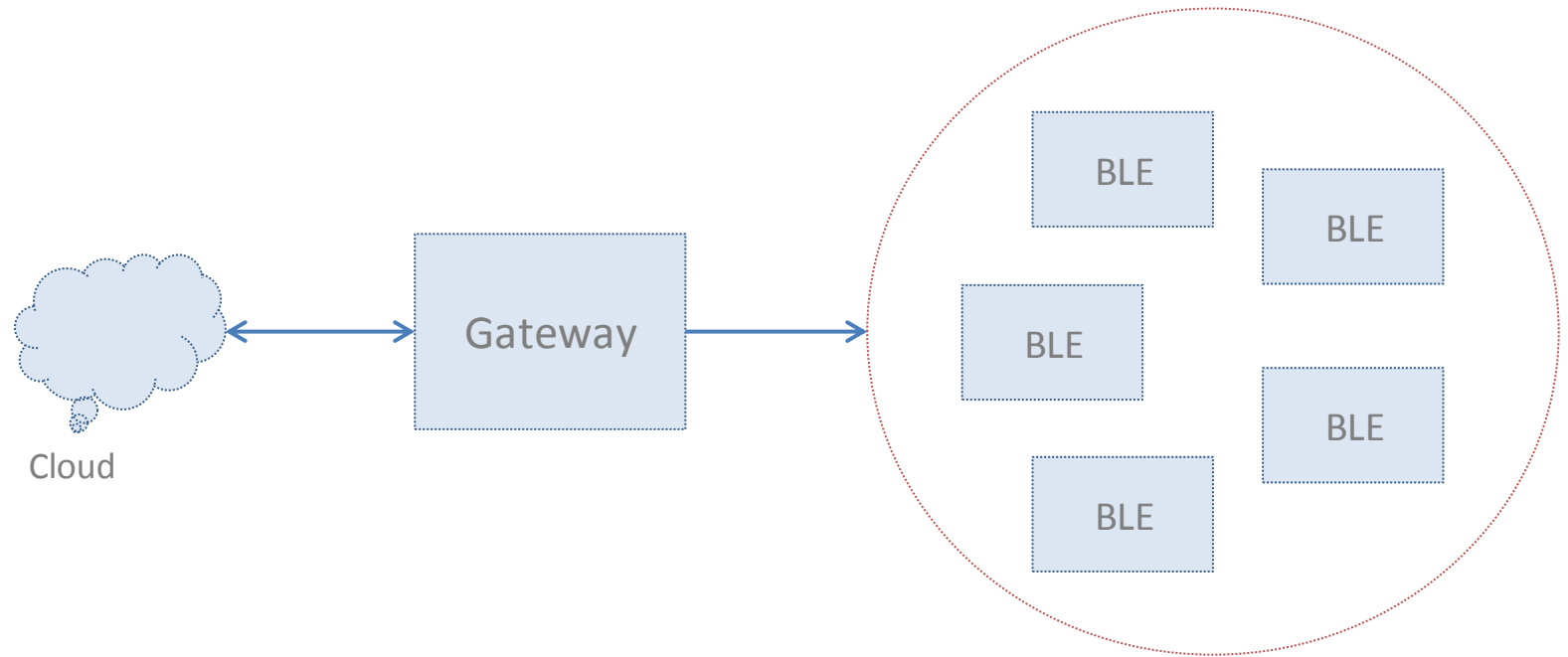
# BLE is designed for IoT

- BLE/Gatt profile:
  - modled after read/write to I/O ports
  - allows small amount of data exchange in one or two packets
- This indicates access to edge devices is a goal:
  - Sensors
  - Controllers (actuators)

# Gateway plays a Key role



# BLE Mesh



# Connecting BLE to Internet

- Mobile sends an HTTP request to BLE controller
  - to operate a device at home.
- BLE sensor sends an HTTP request to the cloud
  - to allow PC or mobile to check status.
- REST APIs for these purposes are proposed in Bluetooth SIG white papers

**Bluetooth Meet The Internet Internet Say Hello To Bluetooth**

<https://blog.bluetooth.com/bluetooth-meet-the-internet-internet-say-hello-to-bluetooth>



# Gateway Architecture

