

Dent bleue pour iOS & OS X

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[Square Bracket Gang]



 SEVEN PRINCIPLES
Enabling Your Business

NOTE TO SELF: Presenter Display showing notes and TIME?!

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[Return -> Gang]



 SEVEN PRINCIPLES
Enabling Your Business

NOTE TO SELF: Presenter Display showing notes and TIME?!

- ☑ Since iOS 5 and OS X 10.7 — Universal API
- ☑ Since iPhone 4S, iPad 3, iPod touch 5th gen
- ☑ Bluetooth hardware makers have their own **CB*** Wrapper
- ☑ Watch probably has **BTLE***, but who cares, really?
- ☑ 🍏 ❤️ that ❤️ Rate Sensor for its demos



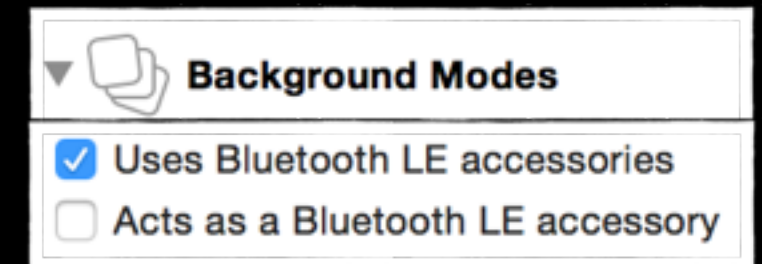
* Core Bluetooth
BlueTooth LE

```
central = CBCentralManager(delegate: self, queue: nil)
```

```
func centralManagerDidUpdateState(central: CBCentralManager!)  
{  
    if central.state == .PoweredOn {  
        central?.scanForPeripheralsWithServices(nil, options: nil)  
    }  
}
```

```
func centralManager(central: CBCentralManager!,  
    didDiscoverPeripheral peripheral: CBPeripheral!,  
    RSSI: NSNumber!)  
{  
    central.connectPeripheral(peripheral, options: nil)  
    central.stopScan() // DO NOT FORGET to not drain the user's battery!  
}
```

Unknown
Resetting
Unsupported
Unauthorized
PoweredOff



WARNING! `nil` → All Peripherals

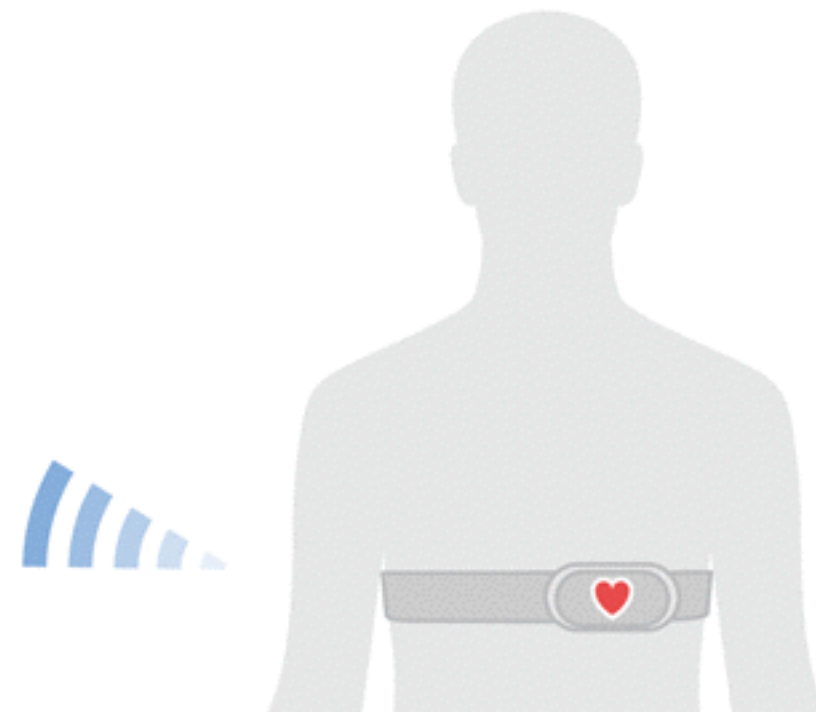
Client

Server



Central

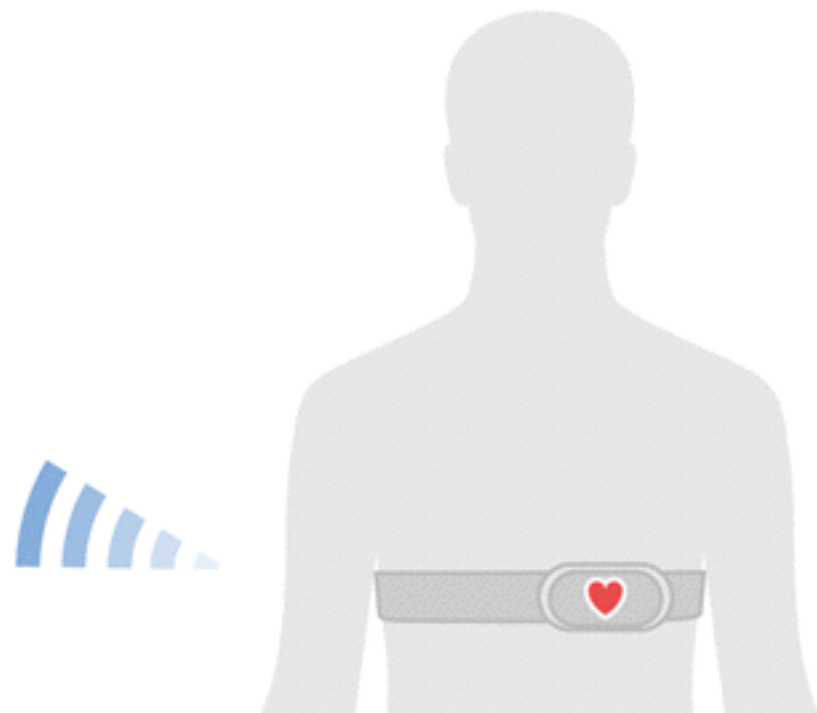
Peripheral



Server

Has data

Peripheral



Service

Heart Rate Monitor

Characteristic

Heart Rate Measurement

Characteristic

Body Sensor Location

iOS 6 & OS X 10.9

Mac and iOS devices can
function as peripherals

developer.bluetooth.org

```
func centralManager(central: CBCentralManager!,
    didConnectPeripheral peripheral: CBPeripheral!)
{
    peripheral.delegate = self
    peripheral.discoverServices(nil)
}

func peripheral(peripheral: CBPeripheral!, didDiscoverServices error: NSError!)
{
    for service in peripheral.services {
        peripheral.discoverCharacteristics(nil, forService: service as CBService)
    }
}
```

WARNING! `nil` → All Services, All Characteristics

developer.bluetooth.org

```
func peripheral(didDiscoverCharacteristicsForService service: CBService!)
{
    for char in service.characteristics {
        peripheral.writeValue(data, forCharacteristic: char, type: .WithoutResponse)
        // e.g. "Turn LED ON" (sending 0x1)
        peripheral.readValueForCharacteristic(characteristic: char)
        // "One Time" Read. e.g. Body Sensor Location
        peripheral.setNotifyValue(true, forCharacteristic: char)
        // subscribe to "didUpdateValueForCharacteristic" e.g. Heart Rate Measurement
    }
}

func peripheral(peripheral: CBPeripheral!,
    didUpdateValueForCharacteristic characteristic: CBCharacteristic!
{ ... }
```

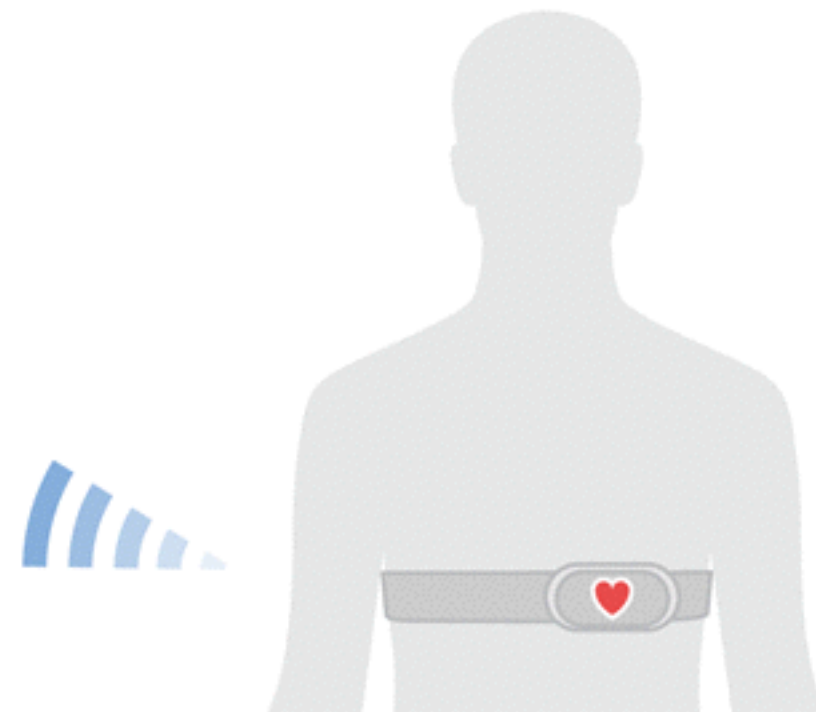

Client

Server



Central

Peripheral



UART: Old Skool Byte Communication

You might have a single service & characteristic, that simple!

```
uartTxChar: CBCharacteristic?  
uartRxChar: CBCharacteristic?  
  
peripheral.writeUARTData(data)  
  
// Under the hood  
peripheral.writeValue(data,  
    forCharacteristic: uartRxChar,  
    type: .WithoutResponse)  
  
// Easy "receive"  
func didReceiveUARTData data: NSData!) {
```

Client

Wants data

Central



- ☑ Your Bible: Core Bluetooth Overview
- ☑ Remember: Bluetooth chip or device makers might have their own **CB** Wrapper for you! Check this first!!!
- ☑ You might not need to worry about “Filtering” the noise
- ☑ Sadly, many things are still Classic Bluetooth
- ☑ **CB** only does BTLE
- ☑ The future of 🍏 + Bluetooth?

