1/25/2016 **Bluetooth Developer Studio Level 1 Profile Report**

PROFILE

Profile Name

BBC MICROBIT

Abstract:

Default 'out of the box' profile for the BBC Micro Bit

Summary:

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Version 1.7 - 22nd January 2016

Standard Bluetooth pairing and security are now used. Specifically:
1. Pairing with passkey and MITM protection
2. White Listing
3. Encrypted link for most operations

All services except Generic Access, Generic Attribute, Device Information and DFU Control Service designated OPTIONAL
DFU Control Service has lost the the DFU Flash Code characteristic since we're now using standard Bluetooth pairing.
Changed names of button characteristics to use A and B instead of 1 and 2
Revised 5 byte representation of the LED Matrix:
 Octet 0, LED Row 1: bit4 bit3 bit2 bit1 bit0
 Octet 1, LED Row 2: bit4 bit3 bit2 bit1 bit0
 Octet 2, LED Row 3: bit4 bit3 bit2 bit1 bit0
 Octet 3, LED Row 4: bit4 bit3 bit2 bit1 bit0
 Octet 4, LED Row 5: bit4 bit3 bit2 bit1 bit0
Maximum length of LED Text documented.
Changed name of "Scrolling Speed" characteristic to "Scrolling Delay".
Reinstated Manufacturer Name String characteristic to the Device Information Service.
DFU Control characteristic given the READ property
Documented supported values the accelerometer and magnetometer period characteristics can take.
Documented magic event type/value of zero
Documented event type/value are little endian

Version 1.6 - 17th October 2015
Removed the Battery Service. No way to establish battery levels on the micro:bit
Added a simple Temperature Service to exploit temperature sensors in micro:bit processors with Temperature and Temperature Period characte
Accelerometer and Magnetometer period characteristics now have uint16 fields instead of uint8 which required scaling up by multipling by 1
Accelerometer Data and Magnetometer Data characteristics now use signed 16 bit integer fields for each of their X, Y and Z parts.
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New characteristic Magnetometer Heading added to the Magnetometer Service. Provides current heading in degrees.
Removed IO Parallel Port characteristic due to complexity and memory considerations.
Added Generic Attribute Service (previously absent in the repository)
Changed the LED Matrix State characteristic field so that we now have one octet per row of LEDs for ease of use.

Version 1.5 - 10th September 2015
Button State 2 characteristic given new, distinct UUID of E95DDA91-251D-470A-A062-FA1922DFA9A8
Removed the System LED State characteristic from the LED Service since it cannot be controlled from the BLE MCU.
Removed the Scrolling State characteristic from the LED Service due to complexity and memory constraints.
Changed LED Matrix State use of “Write Without Response” to “Write” so that no further writes can be made until there’s been an ACK back f
Removed Write property from MicroBit Requirements characteristic.
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Base UUID E95D0000251D470AA062FA1922DFA9A8

Server Role

Client Role

SERVICES

Generic Access 000018000000100080000008

Device Name : 00002A0000001000800000805F9B34FB

Appearance : 00002A0100001000800000805F9B34FB

Peripheral Preferred Connection Parameters : 00002A0400001000800000805F9B34FB

Generic Attribute 000018010000100080000008

Service Changed : 2A05

Device Information 0000180A00001000800000

Model Number String : 00002A2400001000800000805F9B34FB

Serial Number String : 00002A2500001000800000805F9B34FB

Hardware Revision String : 00002A2700001000800000805F9B34FB

Firmware Revision String : 00002A2600001000800000805F9B34FB

Manufacturer Name String : 00002A2900001000800000805F9B34FB

ACCELEROMETER SERVICE	E95D0753251D470AA062FA
Accelerometer Data : E95DCA4B251D470AA062FA1922DFA9A8	
Accelerometer Period : E95DFB24251D470AA062FA1922DFA9A8	
MAGNETOMETER SERVICE	**E95DF2D8251D470AA062FA**
Magnetometer Data : E95DFB11251D470AA062FA1922DFA9A8	
Magnetometer Period : E95D386C251D470AA062FA1922DFA9A8	
Magnetometer Bearing : E95D9715251D470AA062FA1922DFA9A8	
Button Service	**E95D9882251D470AA062FA**
Button A State : E95DDA90251D470AA062FA1922DFA9A8	
Button B State : E95DDA91251D470AA062FA1922DFA9A8	
IO PIN SERVICE	**E95D127B251D470AA062FA**
Pin Data : E95D8D00251D470AA062FA1922DFA9A8	
Pin AD Configuration : E95D5899251D470AA062FA1922DFA9A8	
Pin IO Configuration : E95DB9FE251D470AA062FA1922DFA9A8	
LED SERVICE	**E95DD91D251D470AA062FA**
LED Matrix State : E95D7B77251D470AA062FA1922DFA9A8	
LED Text : E95D93EE251D470AA062FA1922DFA9A8	
Scrolling Delay : E95D0D2D251D470AA062FA1922DFA9A8	
EVENT SERVICE	**E95D93AF251D470AA062FA**
MicroBit Requirements : E95DB84C251D470AA062FA1922DFA9A8	
MicroBit Event : E95D9775251D470AA062FA1922DFA9A8	
Client Requirements : E95D23C4251D470AA062FA1922DFA9A8	
Client Event : E95D5404251D470AA062FA1922DFA9A8	
DFU CONTROL SERVICE	**E95D93B0251D470AA062FA**
DFU Control : E95D93B1251D470AA062FA1922DFA9A8	
TEMPERATURE SERVICE	**E95D6100251D470AA062FA**
Temperature : E95D9250251D470AA062FA1922DFA9A8	
Temperature Period : E95D1B25251D470AA062FA1922DFA9A8	