

Manual of RFduino SDK for techBASIC

Sample program

by Micono Utilities

This description is manual of the sample program in the case of using RFduino by techBASIC.

Link

RFduino: <http://www.rfduino.com>

techBASIC: http://www.byteworks.us/Byte_Works/techBASIC.html

[INDEX]

1. Whole Composition	2
2. BLE Service and Characteristics of RFduino	2
3. BLE connecting flowchart of techBASIC	3
4. Fundamental usage	4
5. Sketch of Sample program	4

Contact: micono@mac.com

Copyright © 2014 Micono Utilities

All rights reserved

1. Whole Composition

The fundamental composition of the sample program (LEDbutton.bas) was illustrated.

1, Variables / Constants

- Definitions, Constants and Variables
- BLEPeripheral, BLECharacteristic

2, GUI settings

- GUI, such as a label and a button, is set up.

3, Start

- To a graphics mode, console is eliminated.
- Start BLE, Search BLE peripherals

4, Event, touch driven

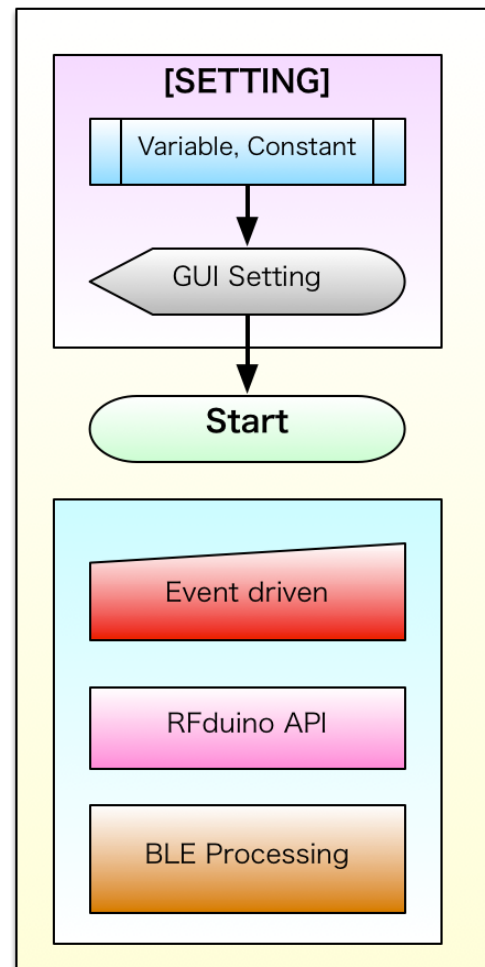
- touchUpInside, valueChanged, nullEvent, touchesBegan etc.
- GUI-related processing

5, RFduino API

- The functions for data reception & transmission

6, BLE processing

- The event of BLE for techBAIC
BLEDiscoveredPeripheral, BLEPeripheralInfo,
BLEServiceInfo, BLECharacteristicInfo
- Processing of connection & disconnection



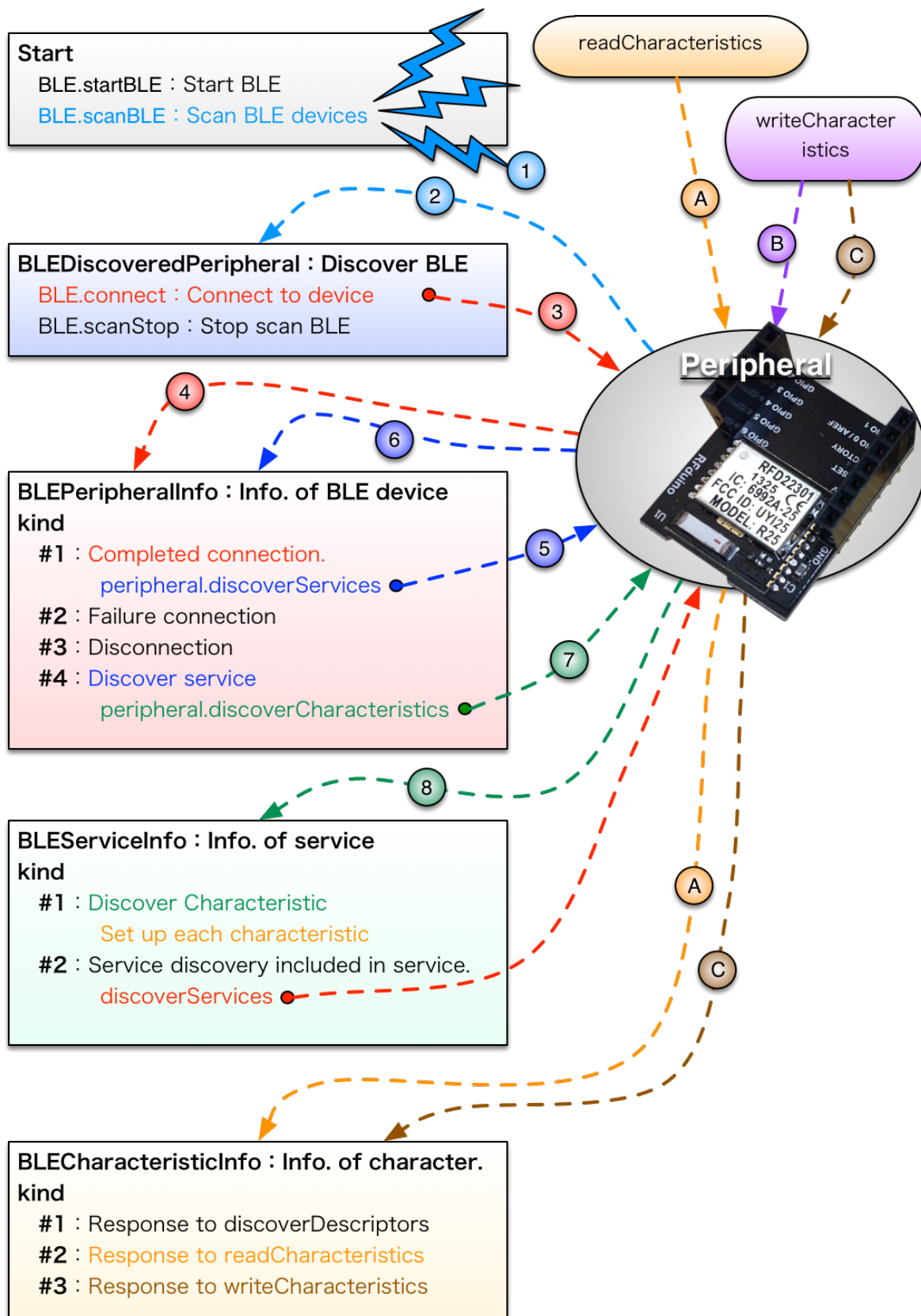
2. BLE Service and Characteristics of RFduino

Service and the characteristics of RFduino were written to below.

RFduino_SERVICE_UUID\$="2220"	: Service
RFduino_RECVIE_UUID\$="2221"	: RECIVE
RFduino_SEND_UUID\$="2222"	: SEND
RFduino_DISCONNECT_UUID\$="2223"	: DISCONNECT

3. BLE connecting flowchart of techBASIC

The flow of the BLE connection by techBASIC was made into the chart. Please see a techBASIC manual & sample program for details.



4. Fundamental usage

Recive data

If data is received from RFduino, "**Sub didReceive (d() as Integer)**" will be called.
It is the data which d() received. Please perform each processing within this function.

The functions for conversion of data

Function **dataStr**(d() as Integer) As String
Function **dataByte**(d() as Integer) As Integer
Function **dataInt**(d() as Integer) As Integer
Function **dataLng**(d() as Integer) As Long
Function **dataSng**(d() as Integer) As Single
Function **dataDouble**(d() as Integer) As Double

Exsample:

```
Sub didReceive(d() as Integer)
  if d(1) then
    btnVw.setImage(onpic)
  else
    btnVw.setImage(offpic)
  end if
End Sub
```

Send Data

When you send data to RFduino, please use the following functions for each dimension.

Function **sendStr**(d As String) As Integer
Function **sendByte**(d As Integer) As Integer
Function **sendInt**(d As Integer) As Integer
Function **sendLng**(d As Long) As Integer
Function **sendSng**(d As Long) As Integer
Function **sendDbI**(d As Long) As Integer

Exsample:

```
if ledsw.isOn then
  e=sendByte(HIGH)
else
  e=sendByte(LOW)
end if
```

Disconnect

Function **disconnectRFduino**() As Integer

Exsample:

```
e=disconnectRFduino
```

5. Sketch of Sample program

Sketch of LEDbutton.bas

RFduinoBLE > LedButton.ino

Sketch of Temperature.bas

RFduinoBLE > Temperature.ino

