[FAQ14111]BLE地址问题？

[DESCRIPTION]

BT4.0的spec上明确规定了BT4.0的蓝牙地址，采用random蓝牙地址。与普通BT3.0蓝牙的地址是不同的，具体区别如下：

<一> EDR地址分配方式：

a）EDR的地址分配方式只有public address一种，定义在Core Spec的[Vol.2], Part B Section 1.2.

b）我们目前是把地址写在NVRAM里面，并且是支持在产线上写入蓝牙地址。

1.2 BLUETOOTH DEVICE ADDRESSING

Each Bluetooth device shall be allocated a unique 48-bit Bluetooth device address (BD_ADDR). This address shall be obtained from the IEEE Registration Authority. The address shall be created in accordance with section 9.2 ("48-bit universal LAN MAC addresses") of the IEEE 802-2001 standard (http://standards.ieee.org/findstds/standard/802-2001.html) and using a valid Organizationally Unique Identifier (OUI) obtained from the IEEE Registration Authority (see http://standards.ieee.org/regauth/oui/forms/ and sections 9 and 9.1 of the IEEE 802-2001 specification). The LAP and UAP form the significant part of the BD_ADDR. The bit pattern in Figure 1.5 is an example BD_ADDR.

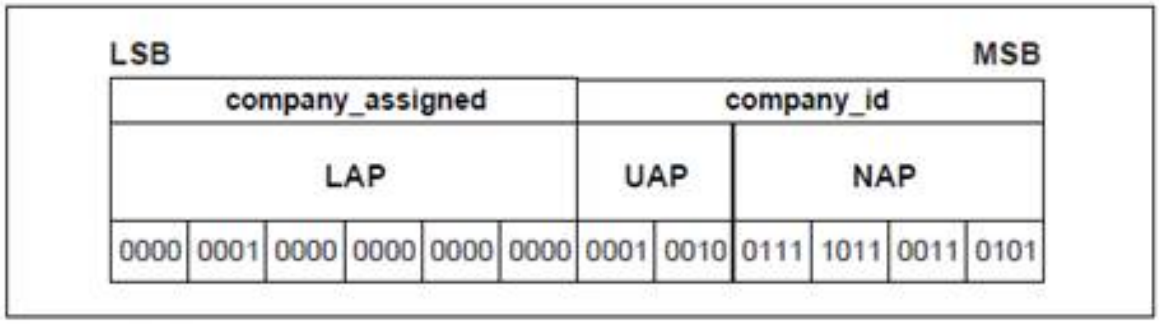

Figure 1.5: Format of BD_ADDR

The BD_ADDR may take any values except the 64 reserved LAP values for general and dedicated inquiries (see Section 1.2.1 on page 69).

<二> BLE地址分配方式：

a）对于BLE来说，有两种地址分配方式：public address和random address，其中random address又分为Static Address和Private Address。这个定义在Core Spec的[Vol. 6], Part B Section 1.3。

我们采用的是random address里的Static address。如下面Spec 截图所描述，Static address在一个power cycled中是不能改变的，但device可以选择在每次power cycle的时候生成一个随机的地址。目前我们是在每次打开蓝牙的时候检查是否有已经产生的地址（写在BT driver的file里），如果没有就随机产生一个，如果有就直接读这个地址。所以在format后第一次打开蓝牙时会随机生成，之后假如没有format的行为， 都不会改变。

1.3.2.1 Static Device Address

A static address is a 48-bit randomly generated address and shall meet the following requirements:

- The two most significant bits of the address shall be equal to 1
- All bits of the random part of the address shall not be equal to 1
- All bits of the random part of the address shall not be equal to 0

The format of a static address is shown in Figure 1.3.

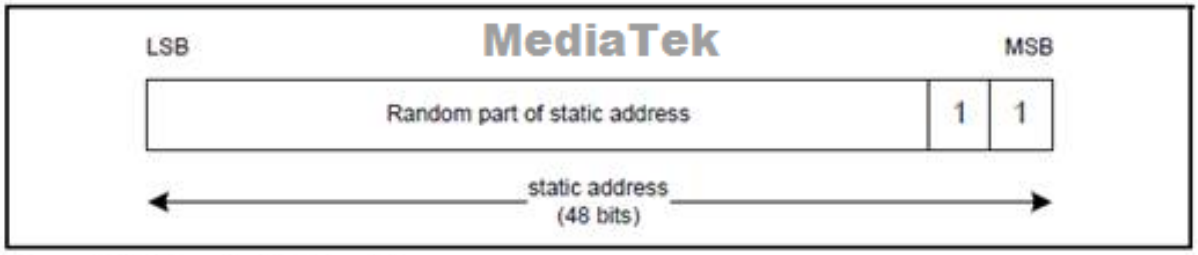

Figure 1.3: Format of static address

A device may choose to initialize its static address to a new value after each power cycle. A device shall not change its static address value once initialized until the device is power cycled.