

Dear Martin,

Below is in responding to your enquiry for further technical info:

Q1) Please describe the method for channel selection during hopping.

<Response> This device use standard Bluetooth off-the-shelf BT module “Q80404_BEM10#_SGS” (record from BT qualification web site attached) and the typical hopping sequence in data mode listed below:

Example of a 79 hopping sequence in data mode:

40, 21, 44, 23, 42, 53, 46, 55, 48, 33, 52, 35, 50, 65, 54, 67,
56, 37, 60, 39, 58, 69, 62, 71, 64, 25, 68, 27, 66, 57, 70, 59,
72, 29, 76, 31, 74, 61, 78, 63, 01, 41, 05, 43, 03, 73, 07, 75,
09, 45, 13, 47, 11, 77, 15, 00, 64, 49, 66, 53, 68, 02, 70, 06,
01, 51, 03, 55, 05, 04

Q2) Based on results from the three tested channels in section 4.4.6 please justify that the hopping sequences results in equal channel use statistically.

<Response> For standard Bluetooth device the maximum data time per slot is 625us, and the maximum Dwell time in 30 secs could be calculated as follow:

Dwell time = $625 \mu\text{s} * 1600 / 79 * 30\text{s} = 0.3797\text{s}$ (in a 30s period)

But in reality, depends on the design, product take some time to prepare the data for transition and does not fully utilize the whole slot time and that is why the measured dwell time is not equal in DHI, DH3 and DH5 mode as tested in section 4.4.6. (This product actually took 164, 172 and 189 u sec respectively in DH1/3/5 mode to prepare the data for each slot transmission. The detail calculation result as below.

Dwell time = $(461+167) \mu\text{s} * 1600 / 79 * 30\text{s} = 0.3797\text{s}$ (in a 30s period)

Dwell time = $(1703+172) \mu\text{s} * (1600 / 3*79) * 30\text{s} = 0.3797\text{s}$ (in a 30s period)

Dwell time = $(2936+189) \mu\text{s} * (1600 / 5*79) * 30\text{s} = 0.3797\text{s}$ (in a 30s period)

This proves that the system does results in equal channel use.

Q3) Please explain how the intended system receivers complies with the receiver bandwidth and tracking requirement of 15.247(a)

<Response> The product used standard Bluetooth off-the-shelf BT module “Q80404_BEM10#_SGS” (record from BT qualification web site attached).

Please let me know if you need further info, thanks.

Best regards,

Steve Cheng