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Federal Communications Commission,
7435 Oakland Mills Road,
Columbia, MD
21046
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2nd July 2003

fao: Stan Lyles

Correspondence Ref. No. 25363; 731 Confirmation No. EA879991

Dear Sir,

With reference to your e-mail, please find the following answers to the matters you have raised.

1/2. Please find a revised letter requesting confidentiality, added to the attachments. The letters in brackets refer to the alpha suffix of the file reference for the items (please note that the test specification (QT) referred to, has not been submitted). I hope that this now covers this situation.

3. Agreed in principle, but with the following proviso. In general FCC Part 15.247 requests a 100kHz measurement bandwidth, but Public Notice DA 00-705 gives a more detailed procedure for 15.247(c), which has been used in this case. This specifies the required RBW to be $1% of the span. For the measurements taken the span used is 4MHz, so the RBW needs to be $40kHz. The actual RBW used is 50kHz and so fulfills the requirement.

4.The use of each frequency is not as you first feared, un-equal and possibly infringing the max. dwell time. The following is an explanation of the technique used and interpretation of the document already supplied.

In the example given for the frequency hopping sequence, the table columns in section 3.3.3 should be read downwards for the frequency sequence and not across. The illustration refers to a Fixed Part (FP) ie. base station, although similar tables may be equally compiled for a Portable Part (PP) ie. handset.

In order to distribute the usage of different hopping sequences around a system, each FP is allocated a different sequence code from the table, which then forms part of it's identity transmission string. This identity is transmitted for every 7 out of 8 frames and as the sequence code is included as part of this data string, this enables any PP to recognise the hopping sequence associated with that particular FP, during the initial synchronisation contact process.

The time slots 0-9 of the frames shown in the example, are allocated to the transmitted RF carriers (down-link FP-PP) and the remaining slots 10-19 are for the receiver (up-link PP-FP). As these are duplex bearers, the slots have been operationally paired on the basis of (0,10), (1,11), (2,12) etc.

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The time slots 10-19 are allocated to the FP receive cycle frequencies. The receiver scans the allocated hopping sequence for each time slot in the same order (no offset), until a link is established with a PP. The hopping sequence is then modified to fit in with existing users on the link, by applying a Hopping Index Offset (HIO).

The illustration shows 2 simultaneous communication links in progress, using time slots 2 & 4 for transmit and 12 & 14 for receive, which follow the frequency hopping sequence down the column for subsequent frames N, N+1, N+2 etc.

If you look at receive slots 12 and 14 (paired with the Tx slots 2 & 4) which have established links, you will see that these follow a different sequence to the remaining un-used slots. This modified sequence is coupled to the transmit carrier sequence and is designed to use the same frequency RF carrier in the up-link direction (PP-FP) of a slot pair (eg 2 & 12), as is used in the down-link direction (FP-PP) in the next frame (N+1), with the sequence then rolling in tandem, for the next frame.

I noticed that the description document has suffered some distortion in it's conversion to a pdf file, so I have added a clearer copy of the relevant page to the Attachments. I hope that these responses answer your concerns. If you need any further information, please contact me.

Yours sincerely,

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