

June 14, 2007
RE: FCC ID: VBNEXTA-01_ATCB005032

Attention: Tom Tidwell

I have a few comments on this Application. Please note that further comments may arise in response to answers provided to the questions below.

1. Please note that as the lower and higher frequencies have to run at reduced power in order to meet spurious emissions compliance issues the installer should have this information. Since MPE and power setup is typically done at the time of installation, this is typically done in the system installation manual. Please explain how the installer is notified of the need for reduced power at the band edges. If necessary, please update the installation manual to address this issue.

The reduced band edge power is only required if the mobile operator does not own the adjacent frequency band or does not have an agreement with the adjacent frequency band's owner. If the need for reduced band edge power exists, the maximum allowable power levels are documented in the official FCC test report which is made available to the mobile operator. Prior to installation, the mobile operator conducts a site survey to determine the requirements for the specific location. The installer follows the site survey plan to physically install the hardware and configure the logical connections. The power levels are set by the Base Station Controller (BSC) network element which is configured and controlled by the mobile operator.

2. Perhaps I have overlooked it, but the tune up procedure does not appear to address the required lower power at the low and high frequencies. Please explain and please show the tune up procedures for these lower power settings.

The tune up procedure is for use during the manufacturing calibration process. The transceiver is designed to transmit at any of 16 preset user selectable power levels (PL) which are defined from PL-0 (maximum) to PL-15 (minimum). The mobile operator achieves reduced band edge power by selecting the appropriate PL at the Base Station Controller (BSC) network element.

3. FYI - Please note that external photos are not generally given confidentiality. If in processing the application the FCC site will not allow external photos to be confidential, you will have to remove them from the request for confidentiality. As this may take additional time and delay the issuance of the grant, please consider removing the external photos from the confidentiality list.

The applicant has been able to do this in the past with the rationale that the units will be mounted in a rack of equipment and not generally in view and the rack of equipment will be located in a restricted area accessed only by authorized personnel.

*** Picture of base station rack that was tested could be submitted as the external photo. All other pictures would be considered internal. ***

4. Please note that it does not appear that all sides of the boards in the device have been provided. Please show the top and bottoms of all boards. Please note that this may require disassembly of the unit.

Please find additional photo file

5. Please note that as this is also an application for Industry Canada, you must provide a sample label for Canada. Please provide the Industry Canada label. Please make sure that all aspects of Canadian labeling has been addressed.

Attached is a label specification drawing that includes Canadian labeling requirements:

6. Please provide that parts list for the transmitter. Please do not use embedded documents within a pdf for this information.

The part designations and values are listed on the schematic diagrams. The applicant has been able to use this approach in the past.

7. Please note that this appears to be a base station and as such MPE would be addressed at the time of licensing. Please note that the report also states that the antenna is specified at the time of licensing. Please explain the 5.5dBi antenna in the MPE report and why an MPE report was provided.

The MPE report was provided for information only. The 5.5 dBi antenna gain was used to show a scenario where the device might be installed with a separation distance of 2 meters. In reality the antenna would always be mounted at a greater distance and the RF Exposure would be considered at the time of licensing.

8. Please note that the report shows that the power at the lowest and highest frequency used must be significantly reduced to meet emissions compliance. The report also states that the low mid and high channels were tested. The significant reduction of power at the lowest and highest channels brings into question the potential non-compliance of the channel just above the lowest frequency and the channel just below the highest frequency. Was any power reduction at these channels required for compliance? Please explain how these channels were verified to be compliant at high power levels for both single and combined modes.

There is no power reduction requirement for any channels other than the lowest and highest channel in the authorized band. It was noted that at maximum rf power the transmitted carrier is attenuated to a level of less than -13 dBm/3 kHz at the points +/- 300 kHz from center of the transmitted channel (see page 18 and page 21 of the test report). The channel just above 1930.2 MHz (centered at 1930.4 MHz) and the channel just below 1989.8 MHz (centered at 1989.6 MHz) provide an additional 100 kHz of guard band before the edges of the band are reached. The emission level at the band edges was found to be less than -40 dBm.

9. Please note that the test report states conducted antenna terminal power measurements were performed using a power meter. However, please note that the list of equipment in the report states that an analyzer was used for conducted antenna terminal measurements. Please explain and please provide information on the measuring instrumentation used to perform power measurements.

A power meter was used to perform these measurements. Please find a corrected report showing the power meter on the equipment list.

10. Please note that the plots of the occupied bandwidth show a term IFOVL in red. If this is an indication of an IF overload, please retest in using analyzer settings that do not overload the measurement device. If this is not an IF overload condition, please explain.

The IF OVL is an indication that the IF path is in an overload condition. If the IF BW or Reference level is increased this condition goes away. The issue with these graphs is that we need to operate the analyzer just on the edge of this condition. The problem is that the IF OVL indication intermittently comes and goes because we are just on the edge of the IF overload condition. In each case we took the data when the IF OVL indication was off. However, even when the analyzer is in VIEW TRACE the IF OVL indicators continues to come and go. If we were to increase the reference level on the analyzer we would not have a sufficiently low noise floor to perform the measurement. The bottom line is that the analyzer was not really in an IF overload condition when the trace was plotted but the indicator may have shown up while we were in the

process of transferring the analyzer screen shot into the computer. In any case there is no noticeable difference in any spurious level either way.