

-----Original Message-----

From: Tim Harrington [mailto:THARRING@fcc.gov]  
Sent: June 2, 2003 5:17 AM  
To: jon.hughes@celltechlabs.com  
Cc: Martin Perrine; Rich Fabina; Tim Harrington;  
bernie.penner@celltechlabs.com  
Subject: Wireless Laptop PC

Various RF exposure policy issues are presently under consideration, as stated in recent TCB sessions. Lid closed guidelines in TCB sessions were mostly intended for Part 15 which has TCB thresholds defined, especially if lid-closed is a secondary use condition. Guidelines for other rule parts may be considered if needed.

At least two recent filings for devices similar to what you describe had mostly nominal exposure issues for lid closed lap-held position, in which case user instructions should be appropriate at this time. SAR evaluation may be appropriate if there are shoulder strap or other configurations with intentional or expected transmission next to body.

If SAR evaluation is appropriate, Bluetooth co-transmission could be evaluated as a non-dominant transmitter switched on and off for high SAR configuration of nearby LAN or Part 22/24.

From: Jonathan Hughes  
To: Tim Harrington  
Date: 5/29/03 7:04PM  
Subject: RE: Wireless Laptop PC

Tim,

Further to my below e-mail and our phone conversation today, I want to confirm if we are required to test co-located transmit also with the Bluetooth. Description of Bluetooth RF output power is as follows:

The direct-connect measured output power of the radio module is 12.5dBm. The antenna gain is 2 dB. So the total output power is approx. 14.5dBm.

Thank you.

Jon

From: Jonathan Hughes  
To: Tim Harrington  
CC: Martin Perrine, bernie.penner@celltechlabs.com  
Date: 5/22/03 4:05PM  
Subject: RE: Wireless Laptop PC

Dear Tim,

We are preparing to test a Laptop PC with various co-located CDMA/GPRS modem, WLAN, and Bluetooth configurations. The CDMA or GPRS external dipole antenna is mounted on the upper right edge of the LCD display, and the WLAN and Bluetooth modules share dual patch antennas mounted internally to the upper left and right sides of the LCD display. The issue is that the Laptop PC can transmit with the lid closed. We would like to confirm if SAR evaluation is required for lid-closed lap-worn configuration (portable), or if the manufacturer performs an MPE evaluation at 20cm and instructs the user not to transmit with the lid closed in the lap-worn position, ensuring that the transmitters are turned off before closing the lid (mobile). Based on the slides you provided at the TCB Training Session 6 last week, it appears that the manufacturer determines if the Laptop is mobile or portable (page 56 FCC ID B & D), with appropriate instructions to the user.

The below correspondence from 10/02 was our last discussion regarding Laptop PC lid-closed transmit issues.

Thank you for your time.

Best regards,

Jon Hughes  
General Manager  
Celltech Labs Inc.  
1955 Moss Court  
Kelowna, B.C.  
Canada V1Y 9L3  
Tel. 250-448-7047  
Fax. 250-448-7046

[www.celltechlabs.com](http://www.celltechlabs.com)

-----Original Message-----

From: Tim Harrington [mailto:THARRING@fcc.gov]  
Sent: Friday, October 04, 2002 3:21 PM  
To: jon.hughes@celltechlabs.com  
Cc: Joe Dichoso; Martin Perrine; Rich Fabina  
Subject: RE: Wireless Laptop PC

Display-top antenna at 20cm is mobile exposure condition. I briefly glanced over the previous correspondence, and it seemed to indicate both Parts 15 & 24 Tx use the same antenna? There may be some EMC test issues for that - please check with Joe if needed. If Part 15 is separate internal antenna and is not at less than 20cm in lower display or in base, SAR not needed. For Part 24 2.1091 categ. excl. may apply. Check Apr 02 TCB training notes for other possible co-location MPE issues. All this assumes Tx won't be used with lid closed on lap or near body.

>>> Jonathan Hughes <jon.hughes@celltechlabs.com> 10/03/02 06:53PM >>>

Thank you for your response. Does this mean that for the same Laptop PC with display antenna and internal co-located antenna (such as our test config.) that MPE measurements can be performed, or SAR tests are required? The display antenna will be for the GPRS and CDMA modem configurations (separate units), and the co-located internal antenna is for the low power integrated 2.4GHz DSSS WLAN card.

-----Original Message-----

From: Tim Harrington [mailto:THARRING@fcc.gov]  
Sent: Thursday, October 03, 2002 3:19 PM  
To: jon.hughes@celltechlabs.com  
Cc: Joe Dichoso; Martin Perrine; Rich Fabina  
Subject: RE: Wireless Laptop PC

You asked if notebook with display section antenna is mobile device for RFx purposes. A quick glance at this filing indicates yes this operates in mobile RFx conditions. I have not checked other Parts 15/24 composite filing issues, and whether the no-collocation grant note is sufficient requires further consideration.

>>> Jonathan Hughes <jon.hughes@celltechlabs.com> 10/02/02 02:11PM >>>

On 9/30/02 a TCB grant was issued for an Itronix Laptop PC FCC ID: KBCIX250AC750. The Laptop PC incorporates a GSM/GPRS PCMCIA modem card with Itronix external dipole antenna located on the top right corner of the LCD panel. This device was granted as a Licensed Base Station for Part 24, and only MPE calculation was provided, no SAR, and therefore considered a mobile device I would assume.

My question:

1. Based on the photograph of the EUT under the "RF Exposure - Antenna" exhibit which shows the antenna location and distance from the user, can this device be considered mobile, & MPE calculation only required, without SAR?

My reason for asking is not to cause any issues on this application, but rather the fact that my most recent questions to you regarding co-located transmitters and the SAR requirements, are based on the exact same Laptop with the same GSM/GPRS modem card installed, as well as a CDMA modem card option, & integrated WLAN PCMCIA card.