

5. To provide holster with belt clip data, additional tests were performed on the original radio. The new are provided in the following revised table and figures.

Table1: MEASURED SAR MATRIX
(Measured during a single 15ms time slot mode)

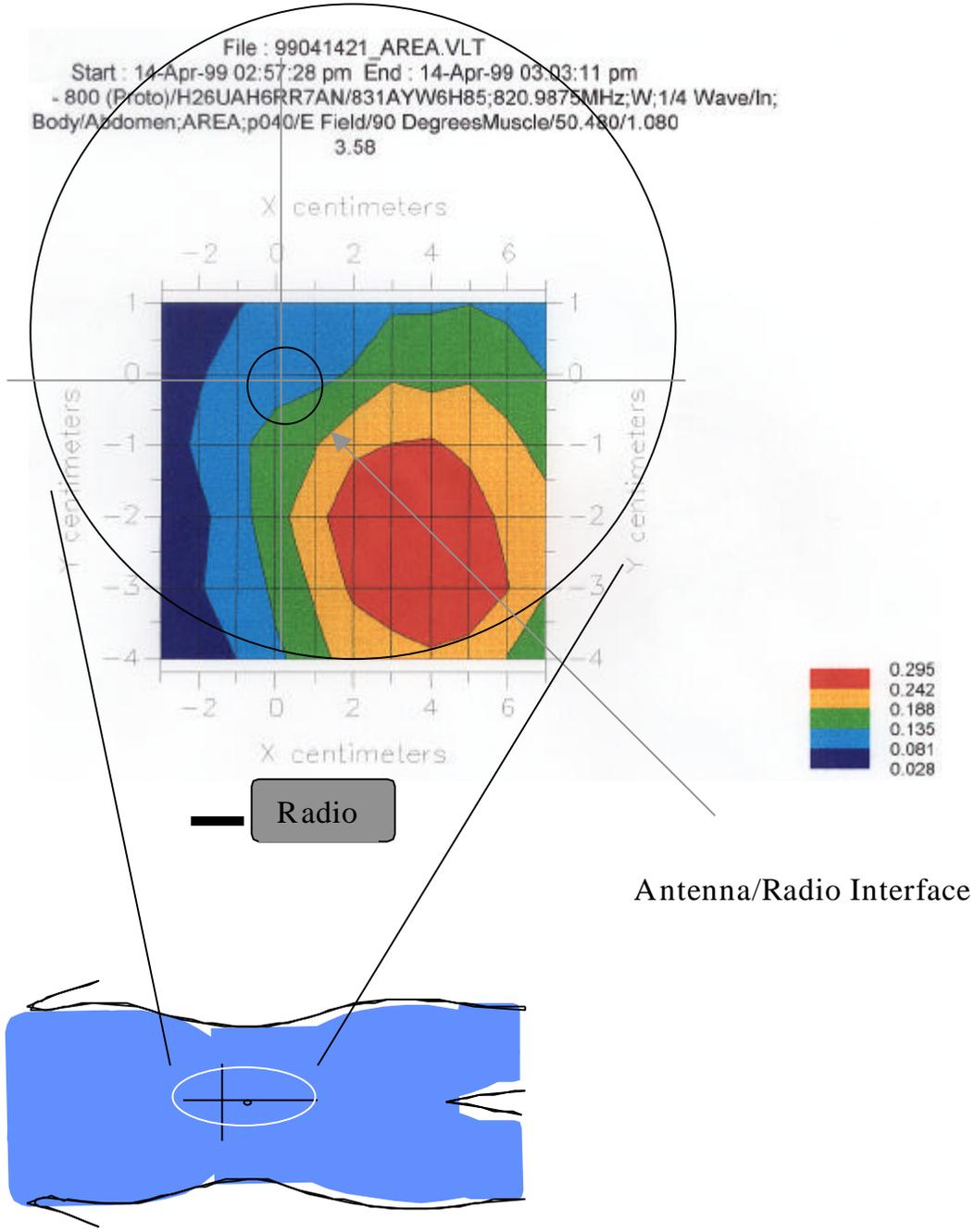
RADIO SERIAL NO.	ANTENNA POSITION	TRANSMIT BAND	SAR (mW/g)		
			ABDOMEN (Dispatch)	FACE (Dispatch)	HEAD (Telephony)
Separation distance from antenna to closest body part:			2.5cm	2.1cm	1.4cm
831AYW6H85	RETRACTED	HIGH	0.28 (Batt. #2)	0.09 (Batt. #1)	0.35 (Batt. #1)
831AYW6H85	EXTENDED	HIGH	0.23 (Batt. #2)	* <0.09	0.28 (Batt. #1)
831AYW6H85	RETRACTED	MID	0.27 (Batt. #2)	0.10 (Batt. #1)	0.32 (Batt. #1)
831AYW6H85	EXTENDED	MID	0.24 (Batt. #2)	0.09 (Batt. #1)	0.30 (Batt. #1)
831AYW6H85	RETRACTED	LOW	0.26 (Batt. #2)	0.09 (Batt. #1)	0.27 (Batt. #1)
831AYW6H85	EXTENDED	LOW	0.24 (Batt. #2)	* <0.09	** <0.27

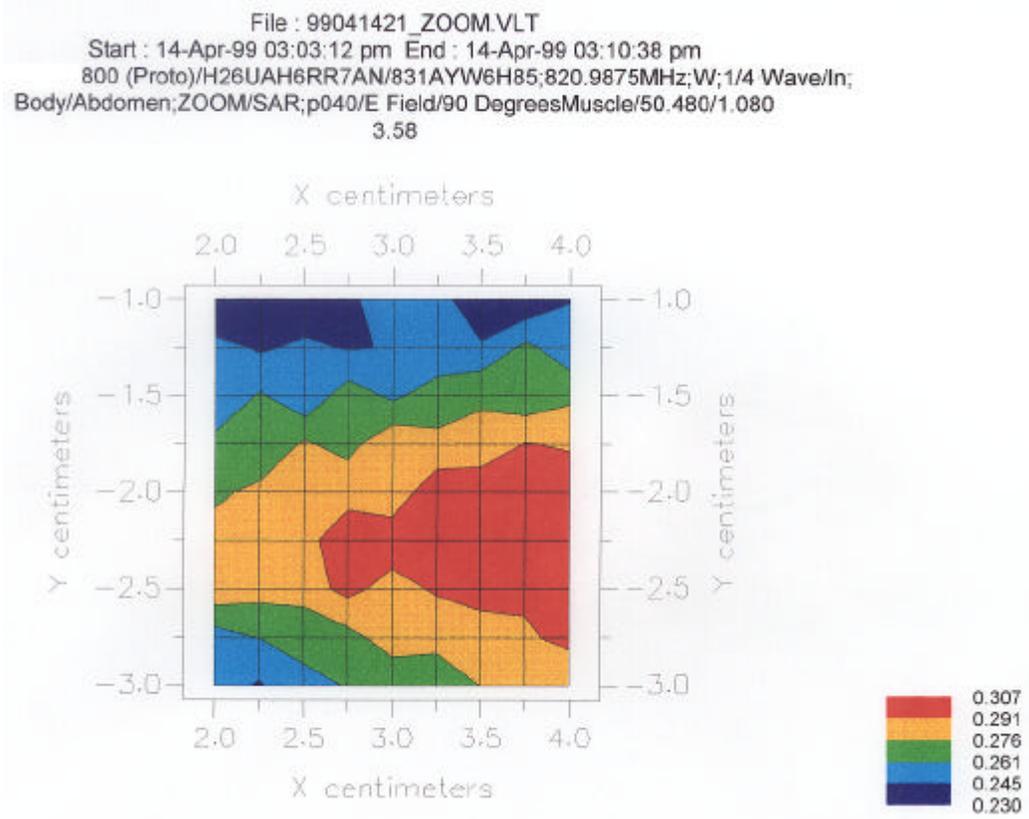
NOTES:

- * Measurement was performed on the “MID” Transmit Band because it had the highest SAR deposition (0.10 mW/g).
- ** Measurement was performed on the “HIGH & MID” Transmit Bands because they had the higher SAR depositions (0.35 mW/g).

Battery #1 (NTN8614A, Li-Ion 900 mAh, 13.8 mm thick)

Battery #2 (NTN8615A, Li-Ion 500 mAh, 8.7 mm thick)





File : c:\idx3\SYSTEM\SARMEAS3\data\Normal\99041421_ZOOM.ULT
Start : 14-Apr-99 03:03:12 pm End : 14-Apr-99 03:10:38 pm
Ver : 3.58

Radio Type : - 800 (Proto)
Model Number : H26UAH6RR7AN
Serial Number : 831AYW6H05
Frequency : 820.9875 MHz
Peak Trans. Pwr : 0.750 W
Start Trans. Pwr: 0.650 W
Antenna Type : 1/4 Wave
Antenna Posn. : In
Phantom Type : Body
Phantom Posn. : Abdomen
Scan Type : ZOOM/SAR
Probe Name : p040
Field Type : E Field
Orientation : 90 Degrees

Mixture Type = Muscle
Mixture Dielectric Constant = 50.480
Mixture Conductivity = 1.080

Comment :

Comment Line 1 Gain=10, Batt:NTN8615A, Ant: Fix.6:1QAM64, SAR @2.5cm
Comment Line 2 No BeIt Clip.Sample/rate:5460/993.Holster NTN8657
Comment Line 3 Measurement taken w/ ROBOT36.ASC LOADED.

Robot : GCISS Robot

Probe Offset = 0.30 cm
Sensor Factor = 0.0100
Conversion Factor = 0.920

p040 Amplifier Channel Settings : 0.137 0.150 0.110

Max Location : X = 3.750, Y = -2.250, Z = 0.000 (cm) Value = 0.572

Measured Values (volts) =

3.533E-003 2.231E-003 1.659E-003 1.230E-003 9.115E-004 6.986E-004
5.128E-004 3.868E-004 2.902E-004 1.841E-004 1.456E-004

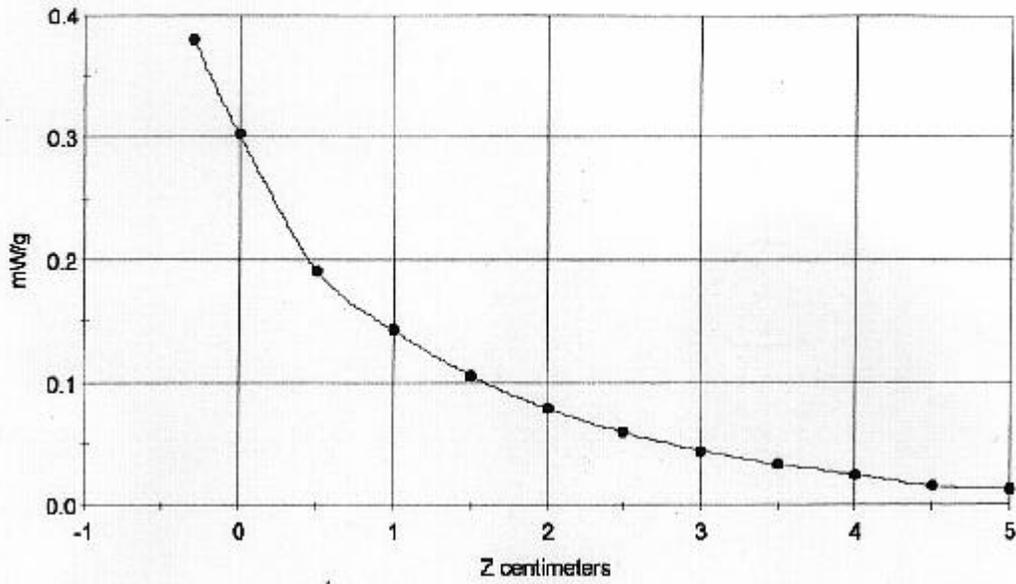
Calc. Voltage @ Surface (Us) = 0.0044

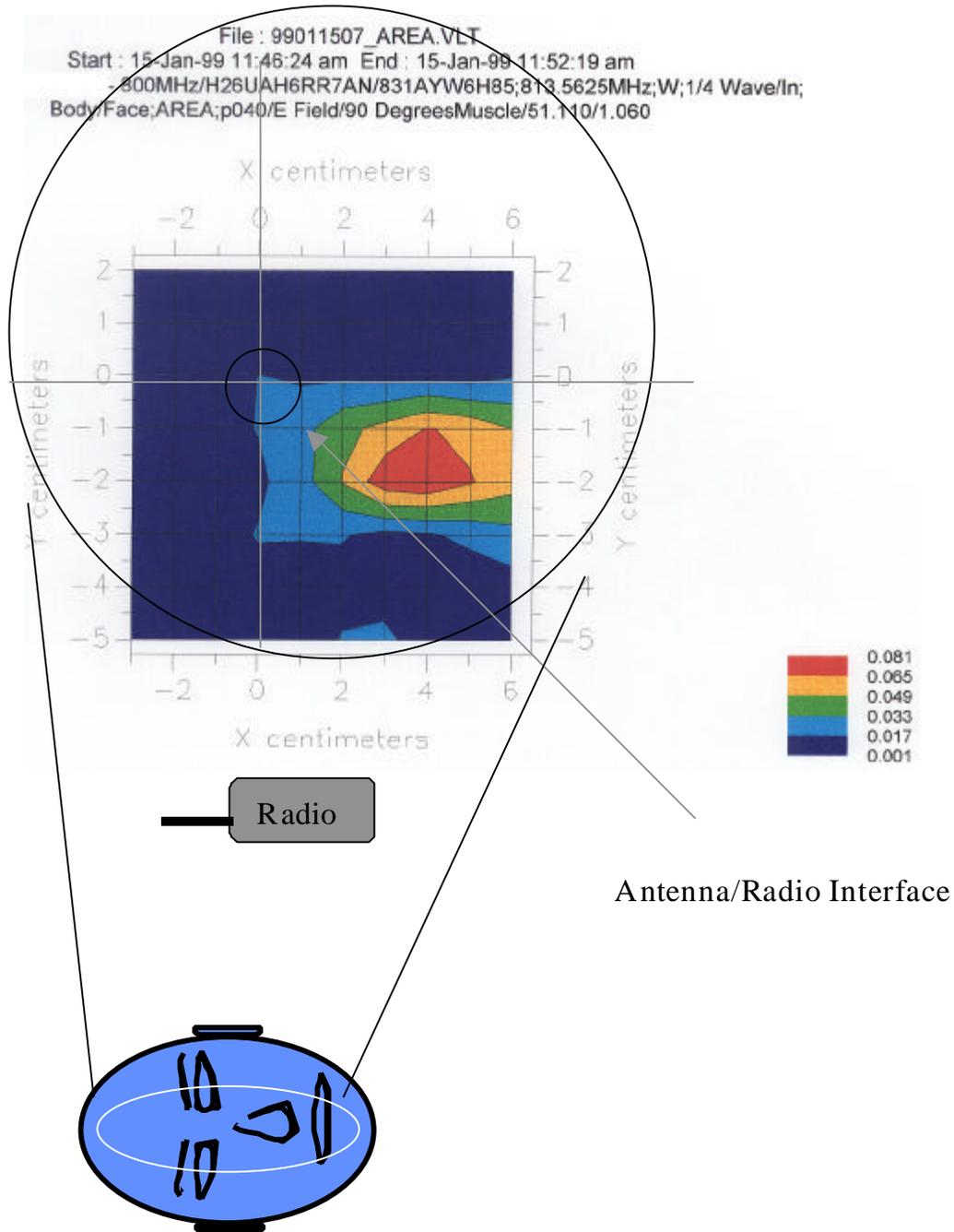
Voltage @ 1.00 cm (Ut) = 0.0020

Ave. Voltage (Us+Ut)/2 = 0.0032

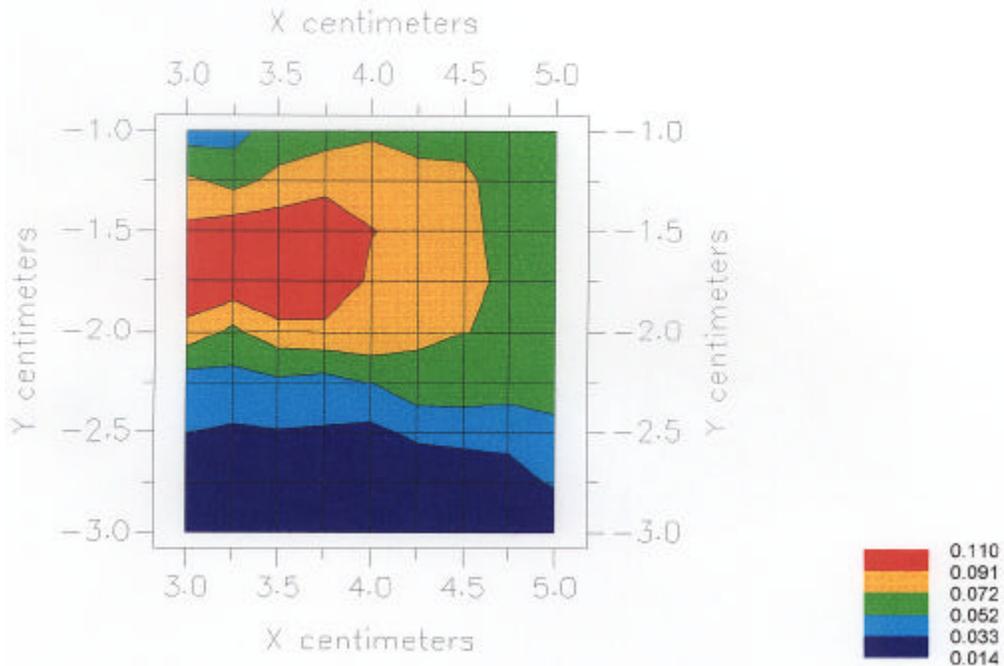
Ave. SAR over 1 g (mW/g) = 0.2769

SAR Scan
File : 99041421_ZOOM.VLT
Start : 14-Apr-99 03:03:12 pm End : 14-Apr-99 03:10:38 pm
- 800 (Proto)/H26UAH6RR7AN/831AYW6H85;820.9875MHz;W;1/4 Wave/In;
Body/Abdomen;ZOOM/SAR;p040/E Field/90 DegreesMuscle/50.480/1.080
3.68





File : 99011507_ZOOM.VLT
Start : 15-Jan-99 11:52:19 am End : 15-Jan-99 11:58:45 am
- 800MHz/H26UAH6RR7AN/831AYW6H85;813.5625MHz;W;1/4 Wave/ln;
Body/Face;ZOOM/SAR;p040/E Field/90 DegreesMuscle/51.110/1.060



File : c:\idx3\SYSTEM\SARMEAS3\data\Normal\99011507_ZOOM.ULT
Start : 15-Jan-99 11:52:19 am End : 15-Jan-99 11:58:45 am

Radio Type : - 800MHz
Model Number : H260AH6RR7AH
Serial Number : 831AYW6H85
Frequency : 813.5625 MHz
Peak Trans. Pwr : 0.758 W
Start Trans. Pwr : 0.623 W
Antenna Type : 1/4 Wave
Antenna Posn. : In
Phantom Type : Body
Phantom Posn. : Face
Scan Type : ZOOM/SAR
Probe Name : p040
Field Type : E Field
Orientation : 90 Degrees

Mixture Type - Muscle
Mixture Dielectric Constant - 51.119
Mixture Conductivity - 1.060

Comment :
Comment Line 1 Gain=10, Batt: NTN861AA, Ant: Fixed (1/4 W).Flip Close
Comment Line 2 No Belt clip connected to radio. 6:1, sample rates=5460/993
Comment Line 3 Measurement taken w/ SAR Ver 9.56 & ROBOT27.ASC LOADED.

Robot : CGISS Robot

Probe Offset - 0.30 cm
Sensor Factor - 0.0100
Conversion Factor - 0.920

p040 Amplifier Channel Settings : 0.316 0.353 0.264

Max Location : X = 3.500, Y = -1.750, Z = 0.000 (cm) Value = 1.200

Measured Values (volts) -
1.269E-003 7.003E-004 4.631E-004 2.792E-004 1.429E-004 5.022E-005
3.486E-005 1.834E-005 0.000E+000 0.000E+000 4.273E-006

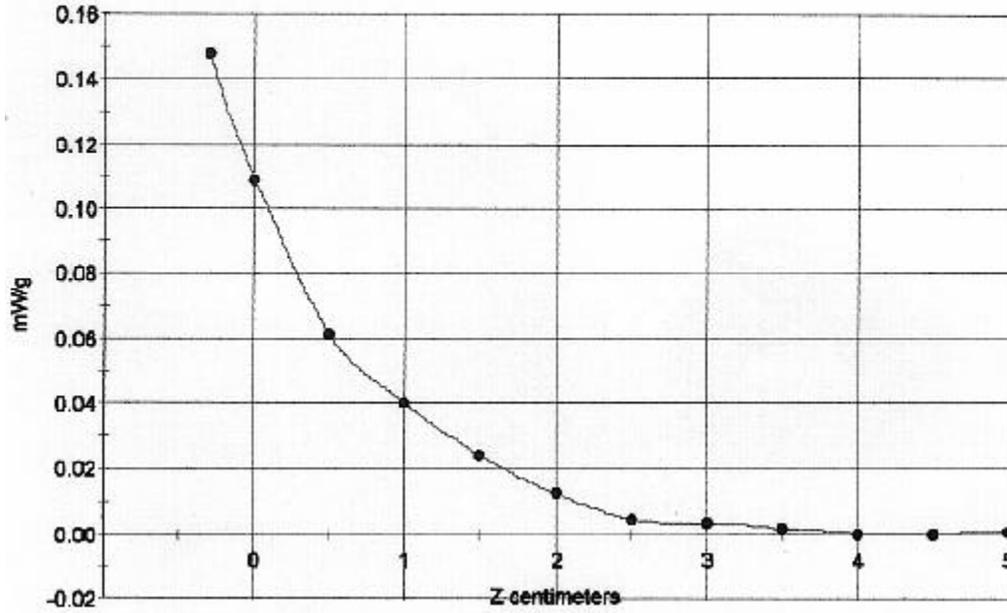
Calc. Voltage @ Surface (Us) = 0.0017

Voltage @ 1.00 cm (Ut) - 0.0006

Ave. Voltage (Us+Ut)/2 - 0.0012

Ave. SAR over 1 g (mW/g) - 0.1002

SAR Scan
File : 99011507_ZOOM.VLT
Start : 15-Jan-99 11:52:19 am End : 15-Jan-99 11:58:45 am
- 800MHz/H26UAH6RR7AN/831AYW6H85;813.5625MHz;W;1/4 Wave/In;
Body/Face;ZOOM/SAR;p040/E Field/90 DegreesMuscle/51.110/1.060



6. Our report of 0.81 mw/gm (or W/kg) for the Maximum calculated 1 gram averaged peak SAR was performed on the basis that this TDMA radio was measured while transmitting in the telephone mode which uses a steady 33.33% duty cycle (3:1 multiplexing using transmission in two 15 ms. time slots of a 90 ms. frame of six time slots). During this mode of operation the radio position relative to a user is normally operated in the "head" position described in exhibit 1.5(1). Given the limit of 1.6 mw/kg provided in 47 CFR 2.1093(d)(5), the radio is compliant with FCC requirements when operated in the telephone mode. It is noted that per that SAR limit, the maximum duty cycle permitted in this operating condition is $1.6/0.81 \times 33.33\% = 65.8\%$.

An irregular duty cycle is expected when a user operates the radio in packet data mode (i.e. 1:1 mode). This transmission duty cycle is the resultant of the Internet protocol, our proprietary transmission protocol and radio link quality, and as a consequence doesn't attain 100%. These factors combine to limit transmission to a maximum of 81 time slots in a frame of 120 time slots (1.8 second period), a duty cycle of 67.5%.

In packet data mode either of 2 operating conditions will occur. One the use of the accessory data cable (listed in Exhibit 4.2.D) attached to a laptop computer. Under this non-handheld condition the radio is expected to be more than 20 cm from the user meaning it is defined to be a mobile device per 47 CFR 2.1091(b). It is only under this condition that the 67.5% packet data duty cycle might occur. Due to the lossy antenna the ERP of the radio is substantially less than the rated conducted RF output power of 0.6 watts which, per 47 CFR 2.1091(c), means the radio is not subject to routine environmental evaluation for RF exposure when operating under this condition. For that reason no data was supplied for this condition.

The second packet data operating condition occurs when the radio is used as an Internet browser, an operating condition under which it is expected that the transmission duty cycle will be very low. During this condition it is expected that a user will hold the radio in the palm of his extended hand, at an individually determined convenient height between the abdomen and the shoulders. The separation distance between the radio and the user's body is expected to be in the range of 15 to 25 cm from the abdomen and 16 to 28 cm from the face as a consequence of the user need to depress the control keys and view the display. SAR testing at those distances was not performed, but data taken at the abdomen reported in Table 1 of Ex. 1.10 showed SAR deposition to be less than 0.28 mw/g or less, which supports a duty cycle limit calculated to be 71.4% at a separation distance of 2.5 cm. This means that when the radio is operated in the packet data 'browser' mode in the expected position it is compliant with the SAR limit (and in consideration of the expected 6 to 10 times greater separation distance, it has additional margin compared to the abdominal measurement data supplied.

7. The radio is capable of being powered by two different thickness batteries (8.7 mm & 13.8 mm) and as a result, the SAR tests were performed with both batteries. Reference Table 1 for measured SAR values with both battery options. The maximum calculated SAR (0.81 mW/g) based on the highest level measured SAR is well within the FCC limit of 1.6 mW/g, per the requirements of 47 CFR 2.1093(d)(2).

8. The radio cover is spring loaded and opens to a fixed position to enable it to operate. Consequently, when tested in the head configuration, the phone ear-piece is positioned against the phantom's ear as described in 1.5 (1). The user does not have control of the open position of the radio cover thus, the SAR test position is not affected.
9. It was determined during a radiated test with the radio clutched in the hand of a test subject that 50 mW of RF energy was uniformly distributed in the hand. Since the mass of the hand was about 200 grams, this represents an SAR of 0.25 W/kg. This is substantially below the limit of 4W/kg and thus the radio is compliant with the 47 CFR 2.1093(d)(2).

The measurement method employed to determine the power deposited was to first observe the power radiated in an anechoic chamber while the radio was in a free-space condition. Then the radio was clutched in the hand of a small female subject, and the decrease in radiated power was observed.