

8<sup>th</sup> April 2004

Mr. Luis Olvera

Intel Corporation  
San Diego CA

Re: FCC ID CNTPP2170SIL  
Applicant: Compaq Computer Corporation  
Correspondence Reference Number: 25636  
731 Confirmation Number: EA459937

Dear Mr. Olvera,

Here are the responses to the questions set by ATCB.

**Question 1.**

***It does not appear that all SAR plots were provided for the tabular results shown. Additionally, it appears that some SAR plots provided do not appear in the tabular results. Also, the maximum SAR plot from each device positioning does not appear to be provided. Please explain/correct as necessary.***

The graphs displayed on pages 41, 45, and 49 relate to position where the conservative SAR for the 802.11g mode was found for the respective low, mid and high channels. The table on page 20 does not include all the measured values, and only provides the conservative SAR value. In future all data will be displayed.

**Question 2.**

***The SAR test report states the duty cycle was 93%, yet a crest factor of 1 appears throughout the testing.***

***Please explain and justify the use of crest factor of 1.***

The crest factor used has yielded a more conservative SAR value than one which reflects the 93% crest factor value. As the crest factor is a divisor the SAR value would be reduced by a factor of less than 1% and as such APREL did not compensate for this. The values recorded are more conservative, and as such would not exceed the limits for FCC compliance.

**Question 3.**

***The SAR test report does not appear to contain:***

***a) Descriptions of extrapolation procedures used to estimate SAR values adjacent to phantom surface (unreachable due to probe case and boundary effects)***

The extrapolation routine used for surface calculations utilizes a fourth order polynomial routine. This will be included in future reports.

***b) Descriptions of within-cube interpolation procedures to get 1 mm or 2 mm SAR grid***

This is explained from sections 3.3 through 3.5, and is in line with IEEE 1528 methodologies.

**c) Description of averaging (integration) procedures to get 1-g SAR from final interpolated grid**  
**Please provide this information.**

This is covered in sections 3.3 through 3.5, with the final averaging method being reproduced in section 3.5 where the algorithm used for complex surface calculations is provided.

**Question 4.**

***The FCC expects consistency in liquid parameters in calibration, system verification, and device testing.***

***The conductivity given from the calibration of the probe at 2450 MHz for its calibration factors is not within 5% of the value within tissue conductivity used for testing. The FCC requires conductivity to be within consistent within 5%, but this appears to be about 10%. Please provide testing or calibration information that meets this requirement.***

The SAR tests were executed using tissue calibrated and manufactured to the guidelines presented in Supplement C (page 36). This method shows that the target values for both epsilon and sigma are within the FCC guidelines. Probe calibrations have been executed using the preferred dielectric target values as detailed on page 35 of FCC Supplement C and are within the 5% allowable tolerance. As a delta of 10% is documented in Supplement C for values relating to sigma when comparing page 35 against page 36, APREL Laboratories utilize a method which will yield more conservative SAR during probe calibrations, as this would allow an uncertainty of less than 5% either way. It is not necessary to retest as the delta between sigma values as presented in Supplement C is less than 10% and as such with this added to the conservative SAR value for the DUT, it is still well within the FCC limits. It should be pointed out that this issue must be addressed by the FCC so as to avoid confusion in the future.

I trust that the above information should be enough for the ATCB to proceed. If you have any further questions please let me know.

Regards,

Stuart Nicol

**Director Product Development,  
Dosimetric R&D.**