

To: hotline@AmericanTCB.com
Subject: audit

To: William Graff
From: Tim Harrington
FCC Equipment Authorization Branch
Re: FCC ID: PD9WCF2011BM

Applicant: Intel Corporation
Correspondence Reference Number: 7690
731 Confirmation Number: TC979244
Date of Original Email: 04/07/2003
Subject: audit

1) Parts List exhibit contains users manual excerpt. Please submit users manual excerpt as separate exhibit.
[This was resubmitted on 4/7/2003](#)

2) Users manual states "This product was tested and found compliant to the FCC requirements for SAR." Near-body SAR compliance was shown only using Supplement C 1.5cm spacing guideline - please revise user manual with corresponding Supplement C example user instructions and/or handheld-only use instructions. Grant note should include following or similar:
SAR compliance has been demonstrated for the specific near-body operating configurations tested for this filing. Near-body operations are restricted to belt-clips, holsters or similar accessories that do not contain metallic components in the assembly and provide at least 1.5 cm separation between the device and the users body. End-users must be informed of the near-body operating requirements for satisfying RF exposure compliance.
[Grant was modified 4/7/2003](#)

3) Cover letter crn from J. Baer states
"Our power measurements were first taken as EIRP measurements using the Frequency Substitution Method. We adjusted the level as close a possible to the original values."
This reference to adjusting EIRP close to original is confusing because original filing, as cover letter states, had only conducted power tests on connected version of card (PD9WCF2011BE=H9PLA4137), with results:
2412MHz 58mW
2437MHz 89mW
2462MHz 81mW
With these conducted powers an assumed 2dBi antenna gain was used to state 21.5 dBm EIRP. Please confirm/demonstrate whether production units have varying channel conducted powers as above, or describe/demonstrate normal operating outputs for all channels.
[This issue was discussed between FCC/Aprel/Intel in April. Additional results have been provided as discussed between these parties in the new SAR report.](#)

4) FCC guidelines for end-user-plug-in integral-antenna cards request SAR evaluation in three expected host products when source-based time-averaged output exceeds 100mW at 2.4 GHz. FYI three-host testing typically not needed for an 89mW card. However, the following replacement grant note sentence is still appropriate:
SAR compliance was evaluated in three PDA configurations as tested in this filing, and is applicable when device is used in PDA configurations with substantially similar physical construction and characteristics, and electrical and RF characteristics.
[Grant was modified 4/7/2003](#)

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5) In general ClassII change filings should preserve grant notes from previous applications. ClassII cover letter from J. Baer requests approval for portable handheld (PDA) operating configurations. In addition to grant note items shown above, please adjust grant notes to following or similar:

Output is peak conducted. Device is approved for mobile and laptop computer operating configurations, and portable handheld configurations, for satisfying RF exposure compliance requirements. Device was tested stand-alone for SAR compliance in a typical laptop computer with side PCMCIA slot, as described in this filing. The highest reported SAR values are: laptop 1.47 W/kg, PDA with 1.5 cm spacing xx W/kg.

[Grant was modified 4/7/2003](#)

6) Application cover letter from J. Sarkar states "Maximum Peak Output Power, Spurious Emissions and Peak Power Spectral Density are applicable." Test Report exhibit contains only conducted emissions. Please submit other test results.

[This was resubmitted on 4/7/2003](#)

7) SAR testing seems to have been done at higher power than in original filing (see also #3 above). SAR should be tested in final production form - power, signal and modulation, spreading on, various or highest bit rates, etc. Supplement C states "The output power of the test sample should not be set using test software or test mode sequences to artificially higher or lower output levels than those pre-programmed for production units." If appropriate please repeat SAR tests at 1.5cm spacing or smaller using correct output power settings.

[This has been provided in the new SAR report](#)

8) SAR test positions are unclear - please submit close-up photos of card in PDA slot as positioned under flat phantom.

[This has been provided in the new SAR report](#)

9) SAR report needs re-format and clarification - present exhibit will be removed.

[This issue was discussed between FCC & April in April. The new SAR report provided should resolve this issue.](#)

10) SAR report can contain 10g-average SAR values from device at flat phantom to simulate hand-over-antenna use. [Noted.](#)