



Palm Inc.

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To: Mr. Stan Lyles, Stanley.Lyles@fcc.gov
Mr. Tim Harrington
FCC Equipment Authorization Branch

From: David Waitt

Subject: FCC ID: O8FJIMI Request For Additional Information.
Applicant: Palm Inc
Correspondence Reference Number: 30106
731 Confirmation Number: EA274518

Date: 14 Dec 2005

This letter addresses your compliance concerns regarding the FCC Class II Permissive change application to add co-located transmitter capability to the new Treo product.

If there are any questions or if additional information is required, please contact me at david.waitt@palm.com

On behalf of Palm Inc,

David Waitt
Sr. Regulatory Engineer
David.waitt@palm.com

FCC 1) Please describe typical expected and/or intended CDMA & 802.11b simultaneous transmitting modes, or give pointer to within filing if info is already there.

PALM) Palm anticipates that it is somewhat uncommon that there actually will be simultaneous transmission.

However, the most obvious scenario in which this could occur is when 802.11B is being used to access the web and the user receives and answers a phone call while the web page continues downloading. In this case the simultaneous transmission would continue until either the call is ended or the download is complete.

2a) pt22/24 SAR test configs with SDIO inserted were selected based on pt22/24 SAR test results where SDIO was not inserted - was it established that those original SAR distributions were not significantly different when SDIO was inserted but not transmitting?

2b) If yes, how was that established?

2c) If not investigated, why not?

CELLTECH) We firstly performed the SAR evaluations with the SDIO card installed on the worst-case channel in each test position established from the original SAR test results without SDIO card installed. After performing "SDIO-in" and "SDIO-out" SAR tests on the selected configurations and examining the subsequent plots we made three important observations that determined our direction. Firstly, the SAR was lower with the SDIO card installed and not transmitting than without the SDIO card installed. Secondly, the radiation pattern (as shown in the area scan plots) and the location of the peak SAR was unaffected by the installation of the SDIO card. Thirdly, the same pattern held true for all tests with the phone held against the ear. These three factors together show that the lower SAR results with the SDIO card installed is a systematic effect across multiple bands on multiple days of SAR testing. It was obvious that this effect was consistent, and therefore in our opinion it is a reasonable assumption that the worst-case SAR channel tested without the SDIO card installed would also be the worst-case SAR channel with the SDIO card installed.

3) Please explain relevance to submit Oct03 SAR report for SDIO card inserted into ViewSonic PDA; in other words what relation does that have if any to SAR results for SDIO in Treo?

PALM) The reports was provided only as additional information. It is the original SAR report that was filed with the SDIO card original FCC grant.

4a) Please explain how +0.2 dB power scaling for SAR is applicable to Treo device, e.g., in terms of tune-up procedures, etc. Recall that FCC guidance is SAR test should be performed at max power.

PALM) Several phones were evaluated for RF transmit power. The phone with the highest transmit power was evaluated for SAR. The power level measured is as close as possible to the maximum RF power. The additional scaling was added to illustrate SAR margin and to present what is envisioned as an absolute worst-case SAR result.

4b) It is noted that "Note(s):" text under pt22/24 MEASUREMENT SUMMARY tables lists the SAR results from original filing without the 0.2 dB scaling.

CELLTECH) The measured SAR levels from the original filing that are reported under the measurement summary tables were not listed for any specific purpose other than to report the worst-case configurations that were determined for evaluation selection with the SDIO card installed. With the added 0.2 dB scaling, the worst-case configurations listed are still worst-case.

5a) There may be some systematic effect that card inserted but not active decreases the pt22/24 SAR, although the SAR distributions seem to be qualitatively relatively similar between SAR report in original vs. this filing. Please comment on possible contributors to this apparent effect, e.g., different phone test samples or not, output powers, other differences between test conditions of SAR data in original vs. this filing, etc.

CELLTECH) All tests within a specific configuration "with" and "without" SDIO card installed were performed on the same day. In addition, each test configuration within the same day was performed under identical test conditions including test device, fluid parameters, probe, DAE, output power measurements, and ambient conditions. Furthermore, the two comparison SAR evaluations "with" and "without" the SDIO card installed, for each specific test configuration, were performed with identical device positioning (registration) and tested within two hours apart. It is therefore our opinion that the only remaining factor is the internal functions of the test device as being responsible for the systematic effect of decreased SAR levels with the SDIO card installed.

5b) This filing does not list with- vs. without-card results under identical test conditions as a "control case" - if available please submit summary of such data.

CELLTECH) Please see attached exhibits "Control Case SAR Test Data Summary 121305R0", "Control Case Head SAR Test Plots 121305R0" (1 of 2 and 2 of 2), and "Control Case Body SAR Test Plots 121305R0".

6) Please submit reference [7] from SAR report sec. 16.0 about multi-band SAR evaluation, using exhibit confidentiality if needed and including corresponding confid.-request cover letter.

CELLTECH) Please see attached confidential exhibit "Multi-Band Evaluation Notes - Dasy4 Manual - March, 2005". Please also see attached exhibit "Confidentiality Request Letter 121405R0".

7) Please discuss and/or give details for any known or expected uncertainty budget changes for multi-band SAR evaluation method.

CELLTECH) Please see attached exhibit "Measurement Uncertainty - Multi-Band SAR - 121405R0".

8) Filings should be clear about transmitter setup & operation capabilities to ensure devices are configured properly according to communication protocol and operating requirements to obtain valid SAR results. Please submit appropriate supporting info, such as:

8a) CDMA MS Protocol Revision number.

PALM) The protocol revision number is 6.

8b) Applicability of test codes to simulate the required test conditions, as defined in 3GPP2, TIA, and other standards.

8c) Base station simulator and test device configuration info and procedures used to maximize output in all applicable modes, including code domain channels, power & relative gain levels.

8d) Identify CDMA Radio Configurations, Service Options, multiplex options, voice/data, code channel combinations and options used for the SAR tests.

8e) Because of the different RC's, SO's, data rates, channel combinations and modulations, filing should include justifications on the selection of applicable configurations to establish and maintain maximum output to demonstrate SAR compliance for other configurations that are not tested.

PALM) A phone call was established with the test set and the phone was configured to transmit ALL UPs. In ALL UP cases, the RC or base band information does not impact the Tx power. If the RC introduced a bit more Tx power, the Tx power limiter will cut it to the desired max power. If the base band asks lower power, the all up will top it to the desired max power.

Therefore, in this mode, the RC and SO do not matter and the RF power output is essentially determined only by what the hardware is capable of producing. RF power control is disabled and the power is limited by the Tx power limiter. Since nothing can impact the Tx power except the Tx power limiter, the desired maximum Tx power should be seen regardless of the RC or SO.

Additionally, because OET-65 allows a 5% power / SAR scaling, the maximum power / SAR was scaled by an additional .2 dB to illustrate that even under the worst-case conditions, the SAR limit was not exceeded.

9) Form 731 states grant should be deferred until 12/31/2005. Please clarify.

PALM) Due to a change in marketing plans, we do not need the grant to be deferred and in fact would like it issued as soon as possible.

10) You have requested short-term confidentiality. However, there is no letter exhibit requesting short-term confidentiality. Please submit a signed letter requesting short-term confidentiality. Letter should include a list of exhibits to be marked confidential. Letter should include a brief explanation as to why confidentiality is requested.

PALM) Palm Inc does not require temporary confidentiality with documents associated with this permissive change request, however, some documents associated with the initial FCC grant are still covered with temporary confidentiality. Palm requests that the documents associated with the initial grant for which temporary confidentiality was given, remain confidential until the FCC is notified by Palm to remove the confidentiality request.

Note that there is a request for permanent associated with this reply.