May 24, 2002

ATCB Inc.
6731 Whittier Avenue
McLean, VA 22101
Attn: Tim Johnson

SUBJECT: **Handspring Inc.**
FCC ID: O8FLON
Request for Additional Information

Dear Tim,

On behalf of Handspring Inc. is our response to SAR questions 3-9 of your request for additional information dated May 22, 2002 for the subject application.

1. The fluid depth is maintained to a minimum of 15cm for the duration of the tests.
2. As per OET Bulletin 65 Supplement C the validation of the system should be within 100MHz of the mid-band channel of each operating mode.
3. Please see attached revised test plots showing liquid and ambient temperatures during the course of the evaluation.
4. Since the actual distance from any part of the tip of the probe to the inner surface of the phantom varies when the probe alignment is at any angle greater than a line normal to the inner surface, this quantity becomes difficult to define. However, as indicated on page 2 of the probe calibration certificate, the nominal distance from the optical detector located at the center of the probe to a detectable surface is 1.3 mm +- 0.2 mm.
5. Please see attached Application Note from the system manufacturer.
6. Please see attached Application Note from the system manufacturer.
7. FYI: The change from 2dB to 3dB in the flow chart per IEEE document P1528 for determining required SAR tests is a proposal only.

If you have any further questions or comments concerning the above, please contact the undersigned.

Sincerely,

Shawn McMillen
General Manager
Celltech Research Inc.
Testing & Engineering Lab

cc: Handspring Inc.

Application Note:
Spatial Peak SAR Evaluation

Spatial Peak SAR for 1 and 10 g

The spatial peak SAR - value for 1 and 10 g is evaluated after the Cube measurements have been done. The basis of the evaluation are the SAR values measured at the points of the fine cube grid consisting of 4 x 4 x 7 or 5 x 5 x 7 points. If you change any parameter afterwards with 'File Modify' (for example crest factor or medium factors) you will have to reevaluate the measurements. This evaluation can be repeated, if your press Job Evaluation on the selected scans. The algorithm that finds the maximal averaged volume is divided into three different stages.

(1) The data between the dipole center of the probe and the surface of the phantom is extrapolated. This data cannot be measured, since the center of the dipoles is 2.7 mm away form the tip of the probe and the distance between the surface and the lowest measuring point is ca 1 mm (see probe calibration sheet). You can visualize the extrapolated data from a cube measurement if you select Graph Evaluated.

(2) The maximal interpolated value is searched with a straight-forward algorithm. Around this maximum the SAR - values averaged over the spatial volumes (1g or 10 g) are computed using the 3d-spline interpolation algorithm. If the volume cannot be evaluated (i.e., if a part of the grid was cut off by the boundary of the measurement area) the evaluation will be started on the corners of the bottom plane of the cube.

(3) All neighboring volumes are evaluated until no neighboring volume with a higher average value is found.

Extrapolation

The extrapolation is based on a least square algorithm [W. Gander, Computermathematik, p.168-180]. Through the points in the first 3 cm in all z-axis, polynomials of order four are calculated. This polynomial is then used to evaluate the points between the surface and the probe tip. The points, calculated from the surface, have a distance of 1 mm from one another.

Interpolation

The interpolation of the points is done with a 3d-Spline. The 3d-Spline is composed of three one-dimensional splines with the "Not a knot"-condition [W. Gander, Computermathematik, p.141-150] (x, y and z -direction) [Numerical Recipes in C, Second Edition, p.123ff].

Volume Averaging

Firstly the size of the cube is calculated. The volume is integrated with the trapezoidal algorithm. 8000 points (20x20x20) are interpolated to calculate the average.

Advanced Extrapolation

The BIOEMC group of the ETH Zurich is currently investigating the boundary effects on E-field probes. As soon as the research is finished DASY3 will allow to compensate for these boundary effects. But until then we do not encourage to use the 'Advanced Extrapolation' option.