TEST REPORT

Ref : TR.157.1.14.SATU.A

SAR TEST REPORT

ONT35/PSION INC
2100 Meadowvale Blvd
MISSISSAUGA, ONTARIO L5N 7J9, CANADA

Testing Performed at SATIMO US

2105 Barrett Park Dr. - Kennesaw, GA

June 06, 2014

Summary:

Device under test: OMNII XT15
Serial number:
Highest SAR value: 1.937 W/kg

	Name	*Function*	*Date*	*Signature*
Prepared by :	Jérôme LUC	Product Manager	06/06/2014	
Checked by :	Jérôme LUC	Product Manager	06/06/2014	
Approved by :	Kim RUTKOWSKI	Quality Manager	06/06/2014	

	Customer Name
Distribution :	-

Issue	*Date*	*Modifications*
A	06/06/2014	Initial release

1 INTRODUCTION

This document contains summary the Specific Absorption Rate (SAR) test results for devices tested.

2 STATEMENT OF COMPLIANCE

SATIMO USA, Inc. declares under its sole responsibility that the product to which this declaration relates, in in conformity with the appropriate RF exposure standards, recommendations and guidelines. It also declares that the product was tested in accordance with the appropriate measurement standards, guidelines and recommended practices**.**

3 DEVICE UNDER TEST

3.1 GENERAL INFORMATION

Device Manufacturer:	-
Device Model:	-
Serial number:	-
Device Category:	Portable transmitter next to body
RF Environment:	General Population/Uncontrolled
Production Unit or Identical Prototype?	-

3.2 DEVICE INFORMATION

Tested modes of Operation	435-470 MHz	IEEE 802.11a,b,g,n
Conducted Power (dBm)	30 dBm	18 dBm
TX Frequency Range (MHz)	435-470	2412-5700
Channel number (ARFCN)	-	1-140
Duty Cycle	1/1 for the test (30% in normal condition)	1/1

Antenna	External for 435-470 Mhz and Internal for IEEE 802.11
Battery	-
Accessories	Holsters (4 different)

4 SAR DEFINITION

Specific Absorption Rate is defined as the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ).

$$SAR = \frac{d}{dt}\left(\frac{dW}{dm}\right) = \frac{d}{dt}\left(\frac{dW}{\rho dV}\right)$$

SAR is expressed in units of watts per kilogram (W/kg). SAR can be related to the electric field at a point by

$$SAR = \frac{\sigma \mid E \mid^2}{\rho}$$

where:
σ = conductivity of the tissue (S/m)
ρ = mass density of the tissue (kg/m3)
E = rms electric field strength (V/m)

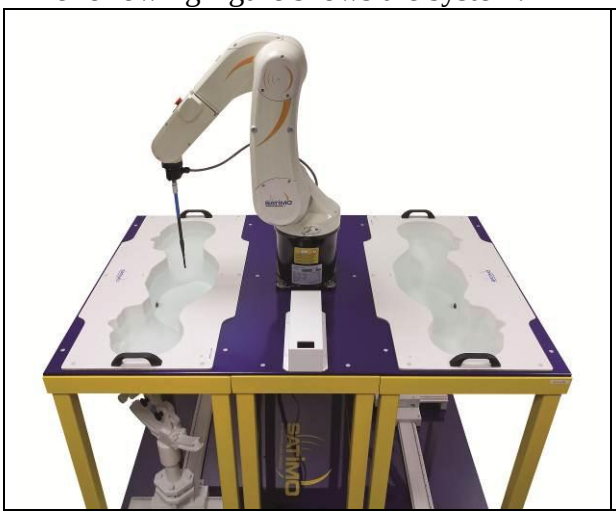
5 EQUIPMENT USED

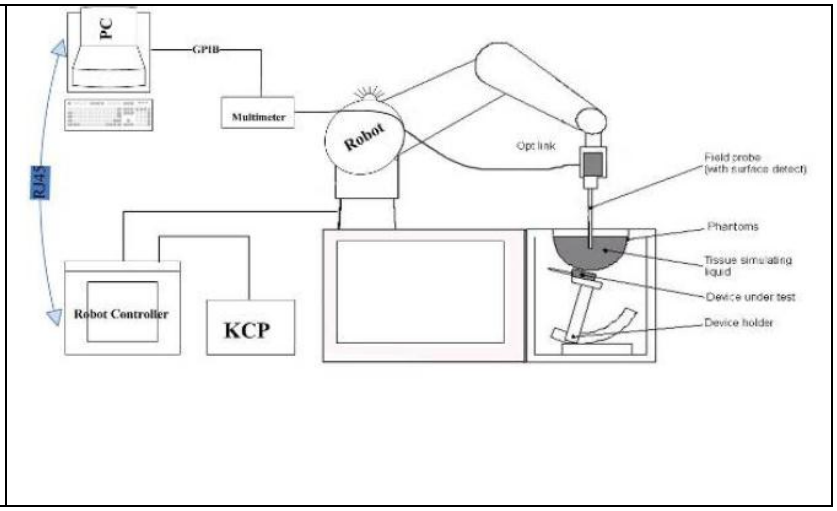
5.1 SAR BENCH

Comosar is a system that is able to determine the SAR distribution inside a phantom of human being according to the governing standards. The Comosar system consists of the following items:

- Main computer to control all the system
- 6 axis robot
- Data acquisition system
- Miniature E-field probe
- Phone holder
- Head simulating tissue

The following figure shows the system.





COMOSAR bench

The mobile phone under test operating at the maximum power level is placed in the phone holder, under the phantom, which is filled with head simulating liquid. The E-Field probe measures the electric field inside the phantom. The OpenSAR software computes the results to give a SAR value in a 1g or 10 g mass.

5.2 PHANTOM

For head measurement:

For the measurements the SAM phantom defined in the IEEE1528:2003 standard is used. The phantom is a polyurethane shell integrated in a low dielectric material table. The thickness of the phantom amounts to 2 mm +/- 0,2 mm (except in the ear region where the thickness increase to 6 mm +/- 0,2 mm). It enables the dosimetric evaluation of device for both left and right head position, as well as body position using the flat part of this phantom.

SAM Phantom

For body measurement:

For the measurements the elliptical phantom defined in the IEC 62209-2 standard is used. The phantom is a polyurethane shell integrated in a low dielectric material table. The thickness of the phantom amounts to 2 mm +/- 0,2 mm. It enables the dosimetric evaluation of device in body position according the IEC 62209-2 standard.

Elliptic Phantom

5.3 PROBE

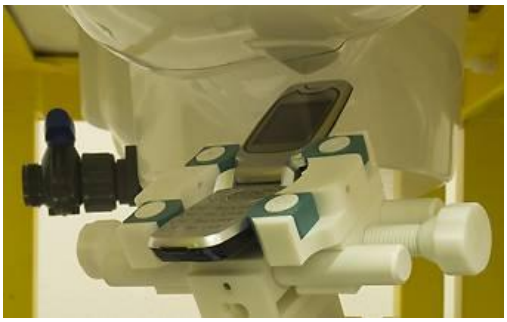
For the measurements the Specific Dosimetric E-Field Probe SSE2 with following specifications is used.

- Dynamic range: 0.01-100 W/kg
- Tip Diameter : 2.6 mm
- Distance between probe tip and sensor center : 1 mm
- Distance between sensor center and the inner phantom surface: 4 mm (repeatability better than +/- 1mm).
- Probe linearity : <0.25 dB
- Axial Isotropy : <0.25 dB
- Spherical Isotropy : <0.50 dB
- Calibration range : 835 to 5800 MHz for head & body simulating liquid
- Angle between probe axis (evaluation axis) and surface normal line : less than 30°

SSE2 probe

5.4 DEVICE HOLDER DESCRIPTION

For head measurement



The SAR value is approximately inversely proportional to the square of the distance between the source and the internal surface of the phantom. For a source at 5 mm distance, a positioning uncertainty of ±0.5 mm would produce a SAR uncertainty of ±20 %. An accurate device positioning is therefore essential for accurate and repeatable measurements.

This Positioning system allows the translation of the mobile phone along the X, Y and Z axis, as well as the required rotation around the phantom ear, for the 2 positions defined by standards (0° "cheek" position and 15° "tilt" position).

Larger DUTs (i.e. laptops, tablets) cannot be tested using this device holder.

For body measurement

The SAR value is approximately inversely proportional to the square of the distance between the source and the internal surface of the phantom. For a source at 5 mm distance, a positioning uncertainty of ±0.5 mm would produce a SAR uncertainty of ±20 %. An accurate device positioning is therefore essential for accurate and repeatable measurements.

This Positioning system allows the translation of the mobile phone along the X, Y and Z axis. It is specifically design for larger DUT as laptop or tablet to easily position it according different orientation.

5.5 EQUIPMENT LIST

Equipment Summary Sheet				
Equipment Description	**Manufacturer / Model**	**Identification No.**	**Current Calibration Date**	**Next Calibration Date**
Phantom	Satimo	SN-29/11-ELLI21	Validated. No cal required.	Validated. No cal required.
COMOSAR Test Bench	Version 3	NA	Validated. No cal required.	Validated. No cal required.
Probe	Satimo	SN 18/11 EPG122	05/2014	05/2015
Open Coaxial Probe	Satimo	SN 35/10 OCPG37	05/2014	05/2015
Network Analyzer	Rhode & Schwarz ZVA	SN100132	02/2013	02/2016
Multimeter	Keithley 2000	1188656	12/2013	12/2016
Signal Generator	Agilent E4438C	MY49070581	12/2013	12/2016
Amplifier	Aethercomm	SN 046	Characterized prior to test. No cal required.	Characterized prior to test. No cal required.
Power Meter	HP E4418A	US38261498	12/2013	12/2016
Power Sensor	HP ECP-E26A	US37181460	12/2013	12/2016
Directional Coupler	Narda 4216-20	01386	Characterized prior to test. No cal required.	Characterized prior to test. No cal required.
Temperature and Humidity Sensor	Control Company	11-661-9	8/2012	8/2015

6 ICNIRP EXPOSURE LIMIT

	Uncontrolled environment General Population W/kg	Controlled environment Professional Population W/kg
Spatial peak SAR Brain	2.0	10.0
Spatial average SAR Whole Body	0.08	0.4
Spatial peak SAR Hands, Feet, Ankles, Wrists	4.0	20.0

Note: Whole Body SAR is averaged over the entire body, Partial Body SAR in Brain is averaged over any 10 gram of tissue defined as a tissue volume in the shape of a cube, Partial Body SAR in Hands,Feet,Ankles,Wrists is averaged over any 10 gram of tissue defined as a tissue volume in the shape of a cube.

Population/Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

Occupational/Controlled Environments are defined as locations where there is exposure that may be incurred by people who are aware of the potential for exposure, (i.e. as a result of employment or occupation).

7 ANSI/IEEE EXPOSURE LIMIT

	Uncontrolled environment General Population W/kg	Controlled environment Professional Population W/kg
Spatial peak SAR Brain	1.6	8.0
Spatial average SAR Whole Body	0.08	0.4
Spatial peak SAR Hands, Feet, Ankles, Wrists	4.0	20.0

Note: Whole Body SAR is averaged over the entire body, Partial Body SAR in Brain is averaged over any 1 gram of tissue defined as a tissue volume in the shape of a cube, Partial Body SAR in Hands,Feet,Ankles,Wrists is averaged over any 10 gram of tissue defined as a tissue volume in the shape of a cube.

Population/Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

Occupational/Controlled Environments are defined as locations where there is exposure that may be incurred by people who are aware of the potential for exposure, (i.e. as a result of employment or occupation).

8 MEASUREMENT PROCEDURE

8.1 DATA EVALUATION

OPENSAR software automatically executes the following procedure to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software.

Probe parameters:
- Sensitivity Normi
- Conversion factor ConvFi
- Diode compression point DCPi

Media parameters:
- Conductivity σ
- Density ρ

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics. If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot \frac{cf}{dcp_i}$$

Where Vi = Compensated signal of channel i (i = 1,2,3)

Ui = Input signal of channel i (i = 1,2,3)

cf = Crest factor of used signal

DCPi = Diode compression point (i = 1,2,3)

From the compensated input signals the primary field data for each channel can be evaluated:

$$E_i = \sqrt{\frac{V_i}{Norm_i \cdot ConvF}}$$

Where Vi = Compensated signal of channel i (i = 1,2,3)

Normi = Sensor sensitivity of channel i (i = 1,2,3)

ConvF = Sensitivity enhancement in solution

The RMS value of the field components gives the total field strength:

$$E_{tot} = \sqrt{E_x^2 + E_y^2 + E_z^2}$$

The primary field data are used to calculate the derived field units.

$$SAR = E_{tot}^2 \cdot \frac{\sigma}{\rho \cdot 1000}$$

Where SAR = local specific absorption rate in mW/g
Etot = total field strength in V/m
σ = conductivity in [mho/m] or [siemens/m]
. ρ = equivalent tissue density in g/cm3

Note that the density is normally set to 1 to account for actual brain density rather than the density of the simulation liquid.

8.2 AREA AND VOLUME SCAN

The following steps are used for each test position

- Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
- Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
- Measurement of the SAR distribution with a grid of 8 to 16 mm * 8 to 16 mm and a constant distance to the inner surface of the phantom. Since the sensors can not directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.
- Around this point, a cube of 30 * 30 * 30 mm or 32 * 32 * 32 mm is assessed by measuring 5 or 8 * 5 or 8 * 4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

8.3 DESCRIPTION OF INTERPOLATION/EXTRAPOLATION SCHEME

The local SAR inside the phantom is measured using small dipole sensing elements inside a probe body. The probe tip must not be in contact with the phantom surface in order to minimize measurements errors, but the highest local SAR will occur at the surface of the phantom.

An extrapolation is using to determinate this highest local SAR values.

The extrapolation is based on a fourth-order least-square polynomial fit of measured data. The local SAR value is then extrapolated from the liquid surface with a 1 mm step.

The measurements have to be performed over a limited time (due to the duration of the battery) so the step of measurement is high. It could vary between 5 and 8 mm. To obtain an accurate assessment of the maximum SAR averaged over 10 grams and 1 gram requires a very fine resolution in the three dimensional scanned data array.

An interpolation is using to provide an array of sufficient resolution.
The measured and extrapolated SAR values are interpolated on a 1 mm grid with a three dimensional thin plate spline algorithm.

8.4 MEASUREMENT UNCERTAINTY

UNCERTAINTY EVALUATION FOR HANDSET SAR TEST								
Uncertainty Component	Tol. (± %)	Prob. Dist.	Div.	c_i (1 g)	c_i (10 g)	1 g u_i (± %)	10 g u_i (± %)	v_i
Measurement System								
Probe Calibration	5,8	N	1	1	1	5,8	5,8	∞
Axial Isotropy	3,5	R	√3	$(1\text{-}c_p)^{1/2}$	$(1\text{-}c_p)^{1/2}$	1,43	1,43	∞
Hemispherical Isotropy	5,9	R	√3	$\sqrt{C_p}$	$\sqrt{C_p}$	2,41	2,41	∞
Boundary Effect	1	R	√3	1	1	0,58	0,58	∞
Linearity	4,7	R	√3	1	1	2,71	2,71	∞
System Detection Limits	1	R	√3	1	1	0,58	0,58	∞
Readout Electronics	0,5	N	1	1	1	0,50	0,50	∞
Response Time	0	R	√3	1	1	0,00	0,00	∞
Integration Time	1,4	R	√3	1	1	0,81	0,81	∞
RF Ambient Conditions	3	R	√3	1	1	1,73	1,73	∞
Probe Positioner Mechanical Tolerance	1,4	R	√3	1	1	0,81	0,81	∞
Probe Positioning with respect to Phantom Shell	1,4	R	√3	1	1	0,81	0,81	∞
Extrapolation, interpolation and Integration Algorithms for Max. SAR Evaluation	2,3	R	√3	1	1	1,33	1,33	∞
Test sample Related								
Test Sample Positioning	2,6	N	1	1	1	2,60	2,60	N-1
Device Holder Uncertainty	3	N	1	1	1	3,00	3,00	N-1
Output Power Variation - SAR drift measurement	5	R	√3	1	1	2,89	2,89	∞
Phantom and Tissue Parameters								
Phantom Uncertainty (shape and thickness tolerances)	4	R	√3	1	1	2,31	2,31	∞
Liquid Conductivity - deviation from target values	5	R	√3	0,64	0,43	1,85	1,24	∞
Liquid Conductivity - measurement uncertainty	4	N	1	0,64	0,43	2,56	1,72	M
Liquid Permittivity - deviation from target values	5	R	√3	0,6	0,49	1,73	1,41	∞
Liquid Permittivity - measurement uncertainty	5	N	1	0,6	0,49	3,00	2,45	M
Combined Standard Uncertainty		RSS				9,51	9,21	
Expanded Uncertainty (95% CONFIDENCE INTERVAL)		k				19,02	18,41	

9 TEST RESULTS

See Annex 1 for device and position pictures

4 different devices with 4 different holster were under test. In order to optimize the number of test, the following procedure was defined:

Step a: In the band 435-470MHz, test of the 3 channel with the device 1 and holster 1.

Step b: In the band 435-470MHz, test on the worst channel measured in step a with the 3 other devices using the holster 1

Step c: In the band 435-470MHz, test on the worst device measured in the step a and b with the 3 other holster

Step d: In IEEE 802.11 b, test on the worst configuration device/holster found on step a through c

Step e: In IEEE 802.11 b,g,n, test on middle channel with the worst device defined in the previous step in the position where antenna is the closest to the phantom

Step f: Test on the right and left head, cheek and tilt position, for the worst device measured in the body position, with no holster, on the different band (worst measured channel for the band 435-470MHz, middle channel for the band IEEE 802.11 b,g,n)

The device is tested using chipset based test mode software to ensure test results are consistent and reliable. For all the measurement, the test mode ensures the device to emit continuously.

The following table reports the results for the tested configuration

BODY MEASUREMENT						
Band	Frequency (Mhz)	Device	Holster	Step	SAR 1g (W/kg)	SAR 10g (W/kg)
435-470	435	1	1	a	0.490	0.348
435-470	450	1	1	a	0.378	0.267
435-470	470	1	1	a	0.280	0.201
435-470	435	2	1	b	0.332	0.234
435-470	435	3	1	b	0.310	0.217
435-470	435	4	1	b	0.430	0.305
435-470	435	1	2	c	0.309	0.217
435-470	435	1	3(back)	c	0.494	0.337
435-470	435	1	3(front)	c	1.090	0.764
435-470	435	1	4	c	0.276	0.199
IEEE 802.11b	2437 (channel 6, 11 mbps)	1	3(front)	d	0.028	0.014
IEEE 802.11b	2437 (channel 6, 11 mbps)	1	1	e	0.162	0.087
IEEE 802.11g	2437 (channel 6, 54 mbps)	1	1	e	0.092	0.046
IEEE 802.11n	2437 (channel 6, 65 mbps)	1	1	e	0.068	0.034
IEEE 802.11n	5500 (channel 100, 65 mbps)	1	1	e	0.104	0.084

HEAD MEASUREMENT						
Band	Frequency (Mhz)	Device	Holster	Position	SAR 1g (W/kg)	SAR 10g (W/kg)
435-470	435	1	-	Right Cheek	1.289	0.880
435-470	435	1	-	Right Tilt	1.656	1.130
435-470	435	1	-	Left Cheek	1.563	1.092
435-470	435	1	-	Left Tilt	1.937	1.346
IEEE 802.11b	2437 (channel 6, 11 mbps)	1	-	Right Cheek	0.030	0.016
IEEE 802.11b	2437 (channel 6, 11 mbps)	1	-	Right Tilt	0.015	0.008
IEEE 802.11b	2437 (channel 6, 11 mbps)	1	-	Left Cheek	0.085	0.044
IEEE 802.11b	2437 (channel 6, 11 mbps)	1	-	Left Tilt	0.027	0.014
IEEE 802.11n	5500 (channel 100, 65 mbps)	1	-	Right Cheek	0.020	0.012
IEEE 802.11n	5500 (channel 100, 65 mbps)	1	-	Right Tilt	0.008	0.006
IEEE 802.11n	5500 (channel 100, 65 mbps)	1	-	Left Cheek	0.017	0.012
IEEE 802.11n	5500 (channel 100, 65 mbps)	1	-	Left Tilt	0.011	0.009

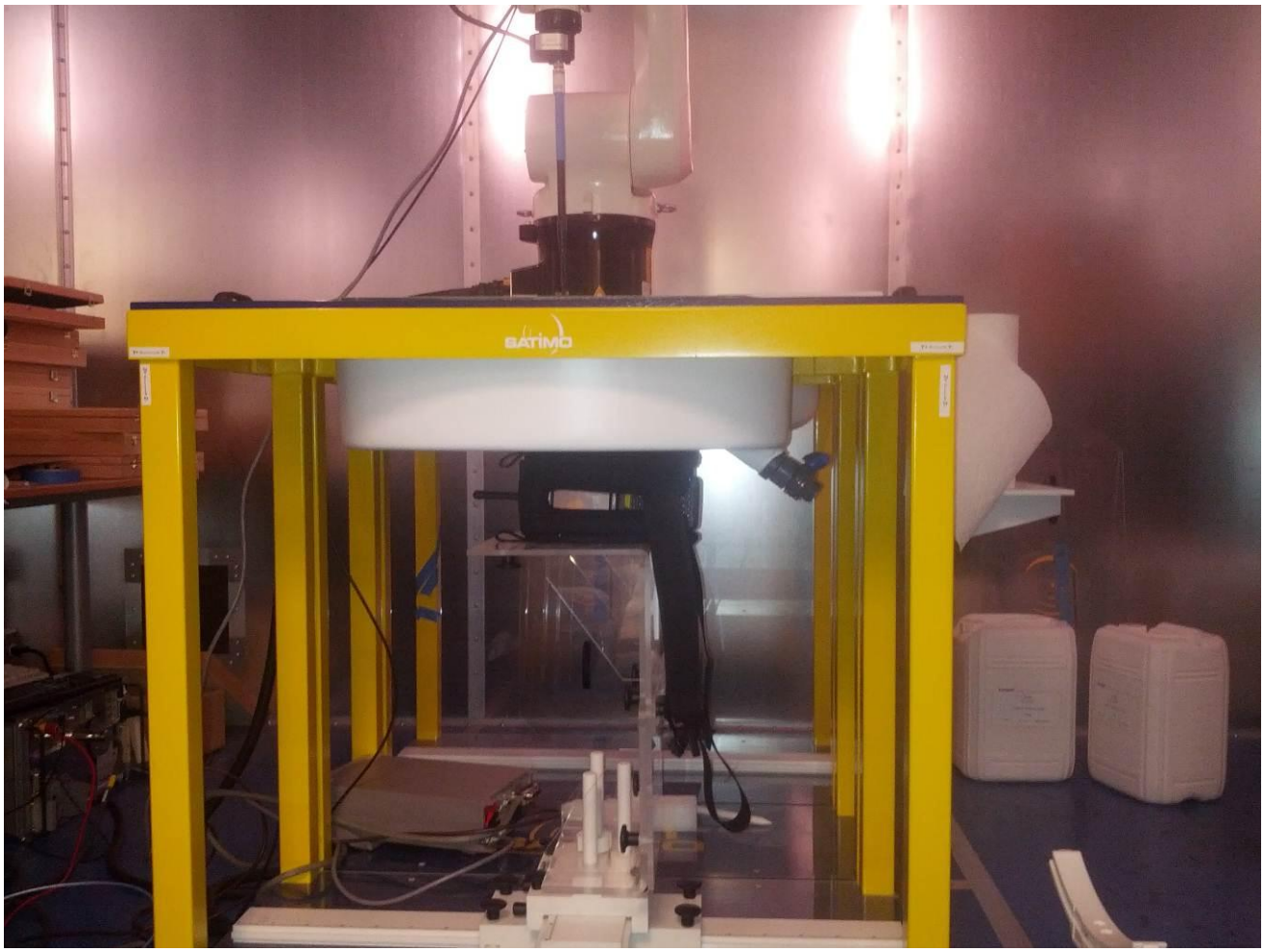
The data of those measurements are shown in annex 2.

Combined SAR results (worst case measured)

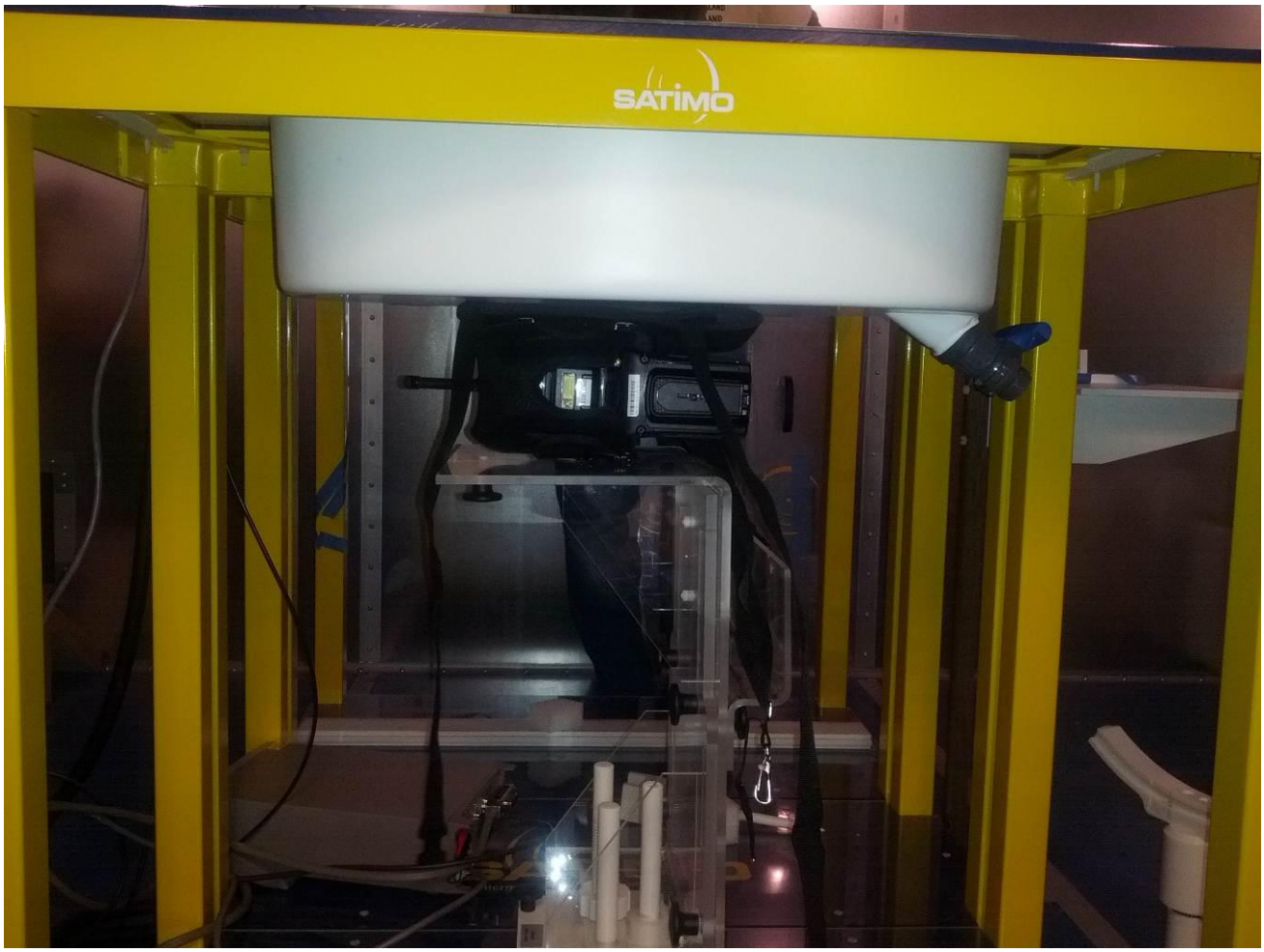
BODY MEASUREMENT					
Band	Frequency (Mhz)	Device	Holster	SAR 1g (W/kg)	SAR 10g (W/kg)
435-470 + IEEE802.11b	435/2437	1	3(front)	1.118	0.778
435-470 + IEEE802.11b	435/2437	1	1	0.652	0.435
435-470 + IEEE802.11g	435/2437	1	1	0.582	0.394
435-470 + IEEE802.11n	435/2437	1	1	0.558	0.382
435-470 + IEEE802.11n	435/5500	1	1	0.594	0.432

HEAD MEASUREMENT						
Band	Frequency (Mhz)	Device	Holster	Position	SAR 1g (W/kg)	SAR 10g (W/kg)
435-470 + IEEE802.11b	435/2437	1	-	Right Cheek	1.319	0.896
435-470 + IEEE802.11b	435/2437	1	-	Right Tilt	1.671	1.138
435-470 + IEEE802.11b	435/2437	1	-	Left Cheek	1.648	1.136
435-470 + IEEE802.11b	435/2437	1	-	Left Tilt	1.964	1.36
435-470 + IEEE802.11n	435/5500	1	-	Right Cheek	1.309	0.892
435-470 + IEEE802.11n	435/5500	1	-	Right Tilt	1.664	1.136
435-470 + IEEE802.11n	435/5500	1	-	Left Cheek	1.58	1.104
435-470 + IEEE802.11n	435/5500	1	-	Left Tilt	1.948	1.355

ANNEX 1: SETUP PHOTO

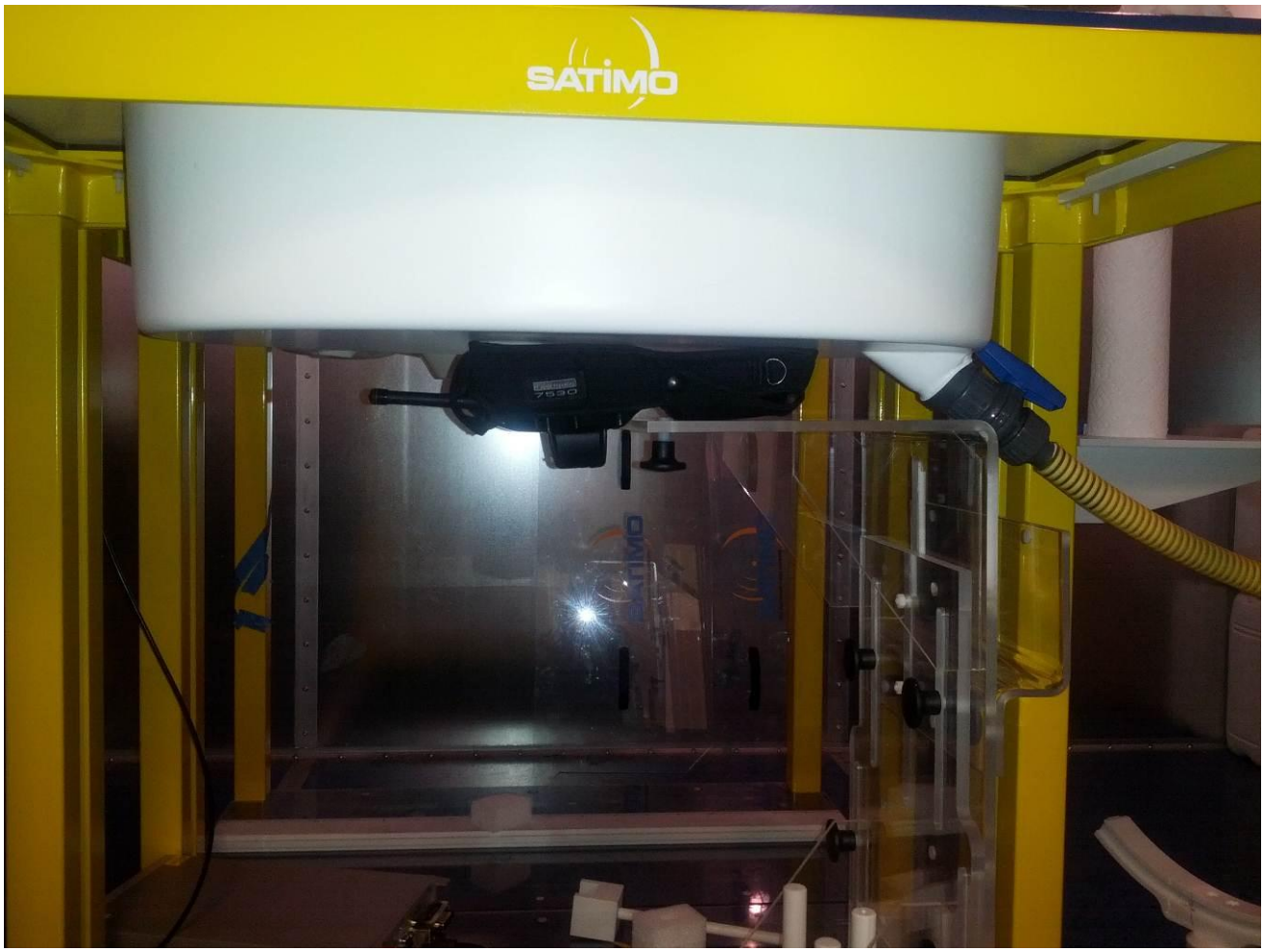


Body position with holster 1



Body position with holster 2

Body position with holster 3 – back position

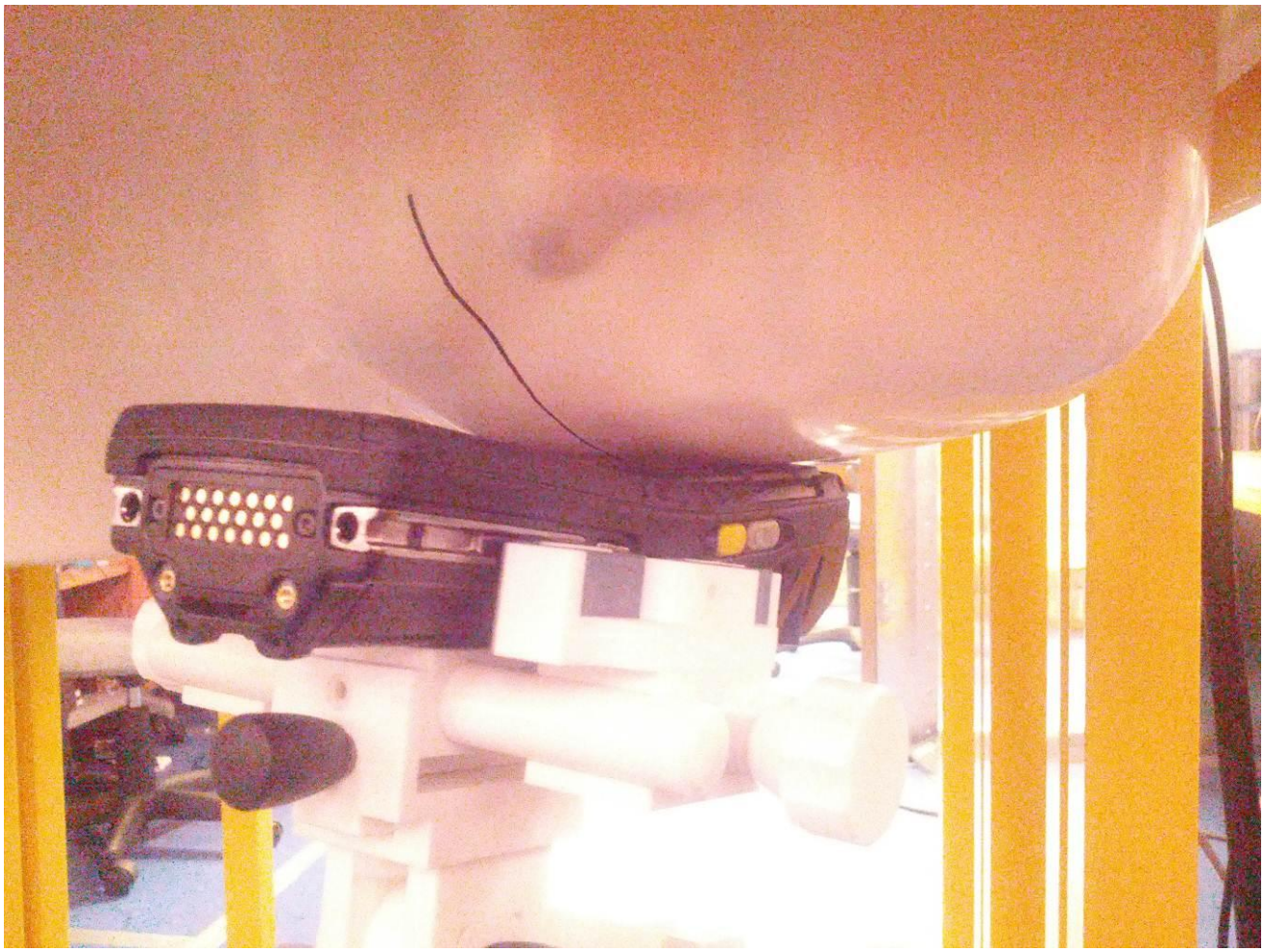


Body position with holster 3 – Front position

Body position with holster 4

Right Cheek position

Right Tilt position



Left Cheek position

Left Tilt position

ANNEX 3: SAR MEASUREMENT

SAR Measurement at 435 MHz (Body)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Body – Device 1, holster 1

A. Experimental conditions

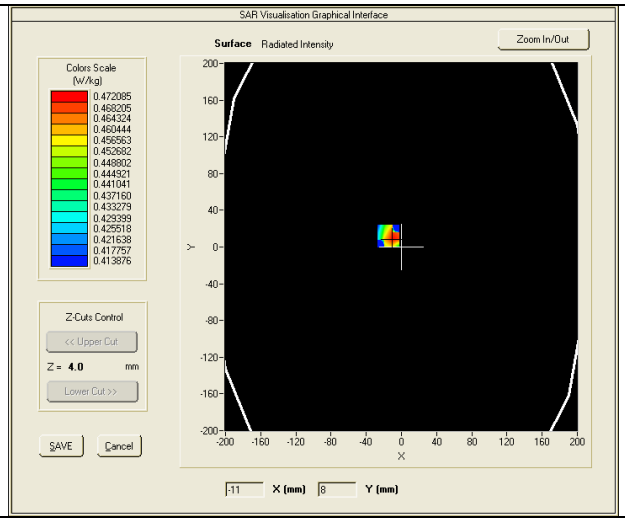
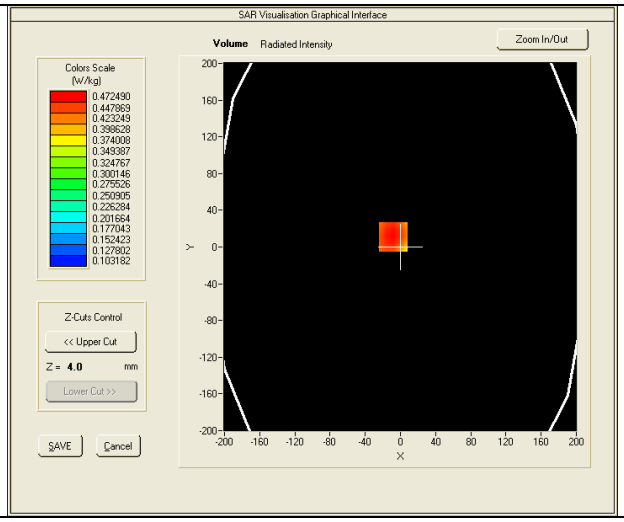
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Elliptical Phantom SN 29/11 ELLI21
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 6.52 DCP: 120, 122, 117 mV
Device Position	Body
Band	CUSTOM
Channels	Low
Signal	CUSTOM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel -):

Frequency (MHz)	435.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	37.66
Conductivity (S/m)	0.91
Variation (%)	-0.04

C. SAR Surface And Volume

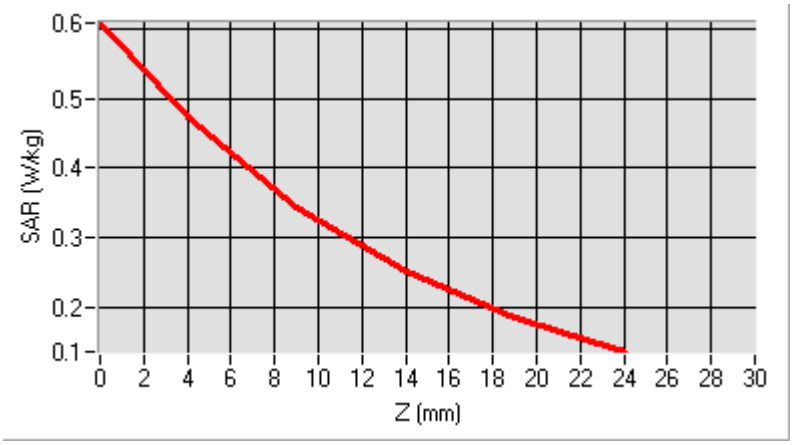
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-8.00, Y=11.00
SAR Peak: 0.61 W/kg

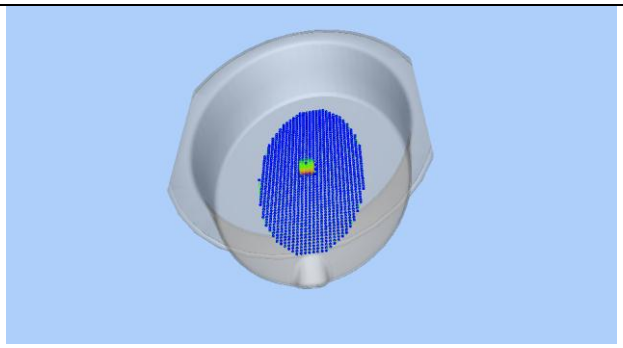
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.348
SAR 1g (W/Kg)	0.490

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at 450 MHz (Body)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Body – Device 1, holster 1

A. Experimental conditions

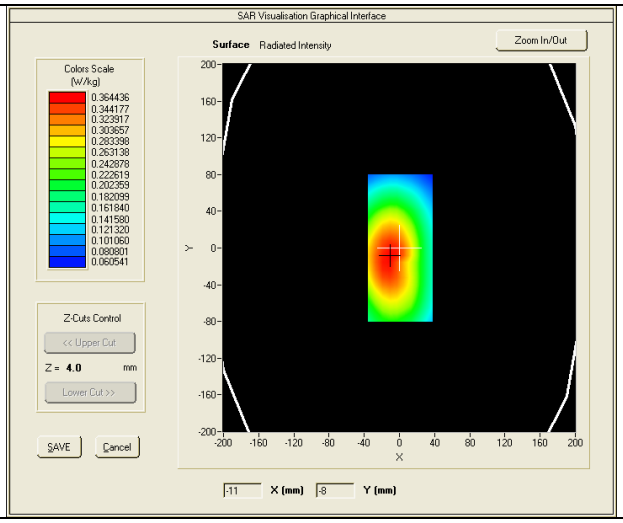
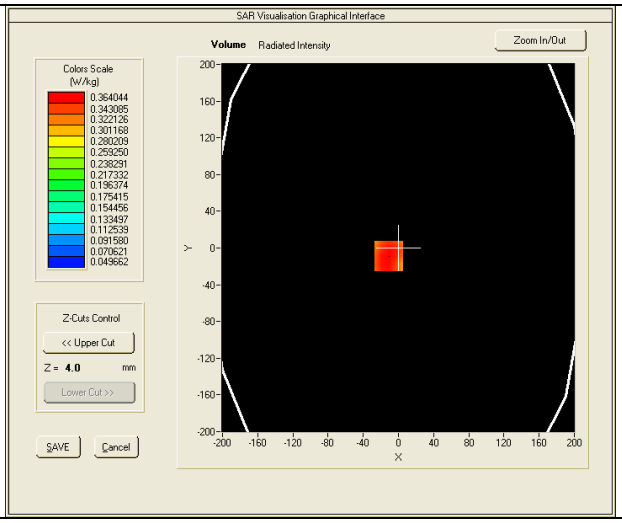
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Elliptical Phantom SN 29/11 ELLI21
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 6.52 DCP: 120, 122, 117 mV
Device Position	Body
Band	CUSTOM
Channels	Low
Signal	CUSTOM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel -):

Frequency (MHz)	450.00
Relative permittivity (real part)	44.21
Relative permittivity (imaginary part)	36.41
Conductivity (S/m)	0.91
Variation (%)	-0.46

C. SAR Surface And Volume

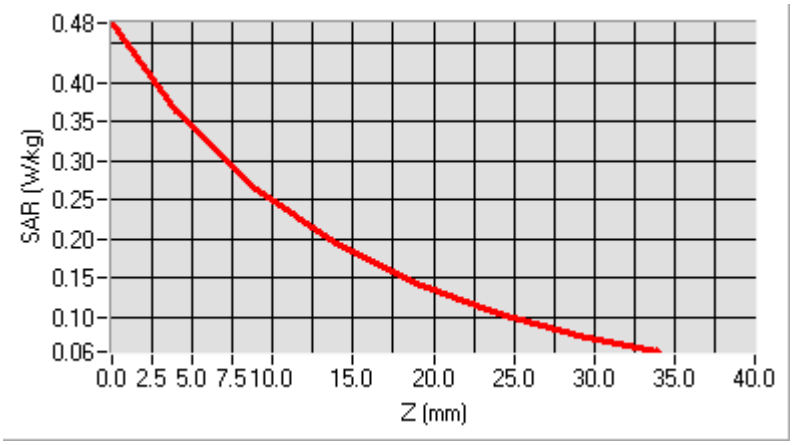
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-11.00, Y=-9.00
SAR Peak: 0.48 W/kg

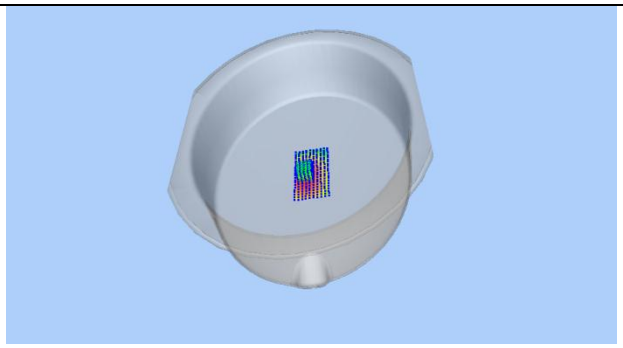
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.267
SAR 1g (W/Kg)	0.378

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at 475 MHz (Body)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Body – Device 1, holster 1

A. Experimental conditions

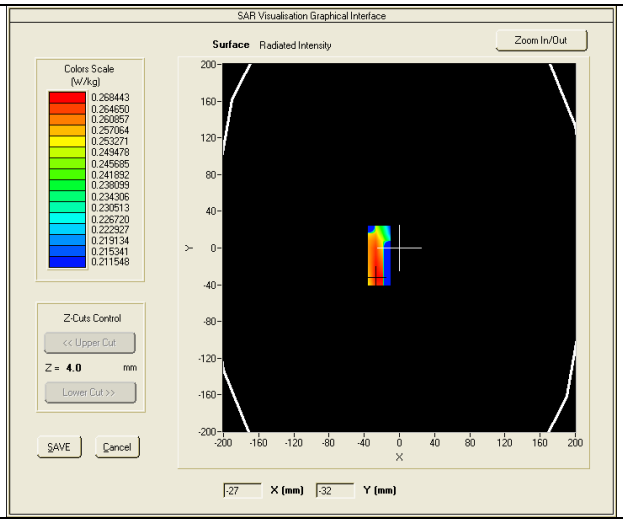
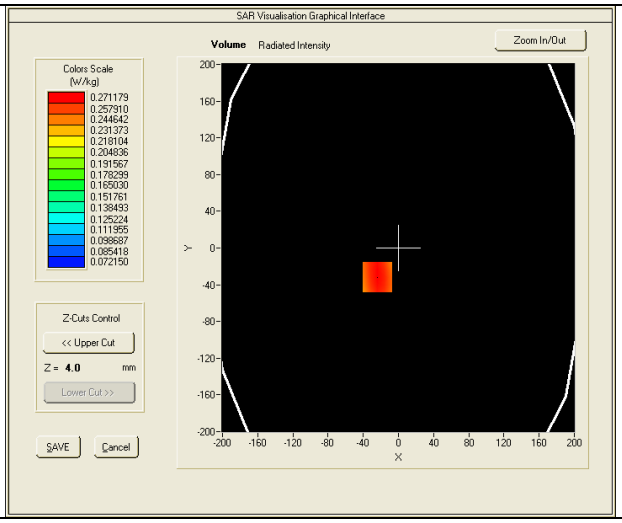
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Elliptical Phantom SN 29/11 ELLI21
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 6.52 DCP: 120, 122, 117 mV
Device Position	Body
Band	CUSTOM
Channels	Low
Signal	CUSTOM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel -):

Frequency (MHz)	450.00
Relative permittivity (real part)	43.62
Relative permittivity (imaginary part)	34.28
Conductivity (S/m)	0.90
Variation (%)	-0.32

C. SAR Surface And Volume

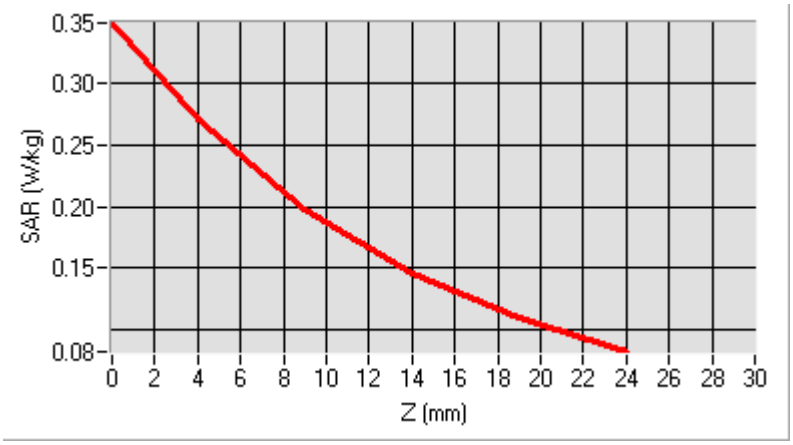
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-24.00, Y=-32.00
SAR Peak: 0.35 W/kg

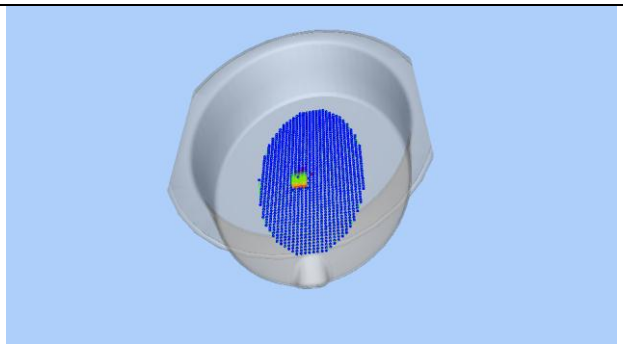
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.201
SAR 1g (W/Kg)	0.280

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at 435 MHz (Body)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Body – Device 2, holster 1

A. Experimental conditions

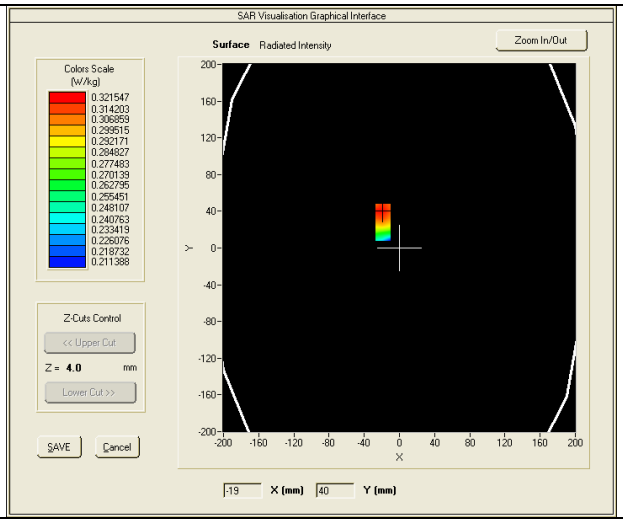
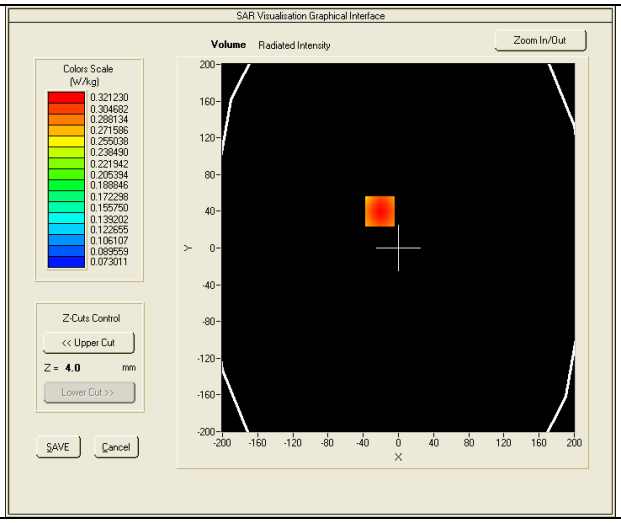
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Elliptical Phantom SN 29/11 ELLI21
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 6.52 DCP: 120, 122, 117 mV
Device Position	Body
Band	CUSTOM
Channels	Low
Signal	CUSTOM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel -):

Frequency (MHz)	435.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	37.66
Conductivity (S/m)	0.91
Variation (%)	-0.10

C. SAR Surface And Volume

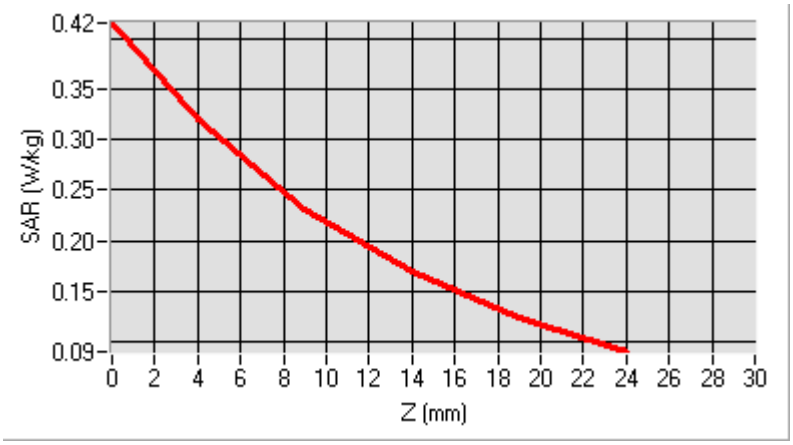
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-21.00, Y=40.00
SAR Peak: 0.42 W/kg

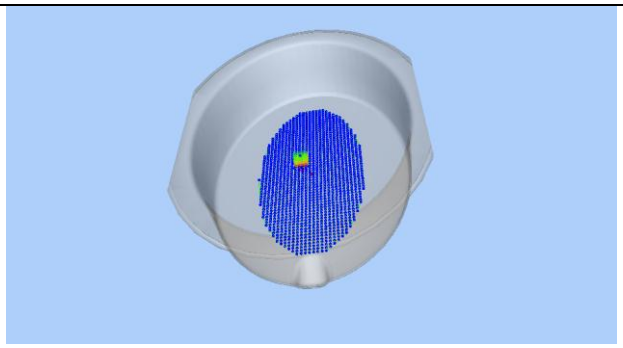
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.234
SAR 1g (W/Kg)	0.332

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at 435 MHz (Body)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Body – Device 3, holster 1

A. Experimental conditions

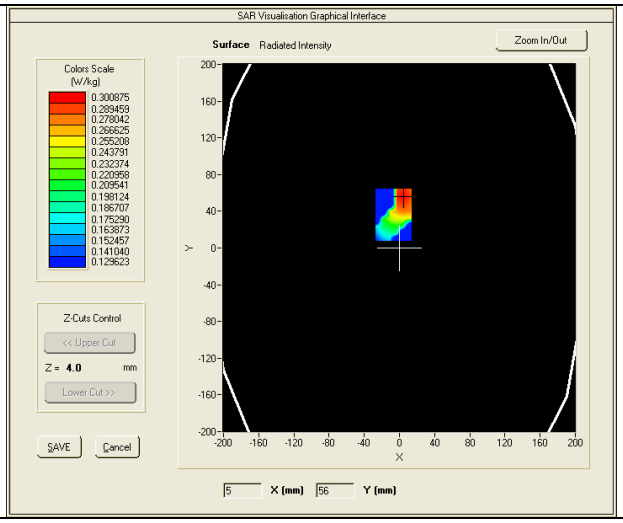
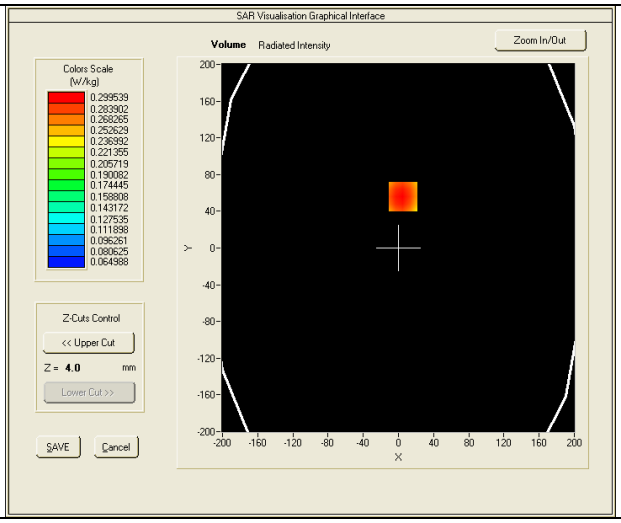
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Elliptical Phantom SN 29/11 ELLI21
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 6.52 DCP: 120, 122, 117 mV
Device Position	Body
Band	CUSTOM
Channels	Low
Signal	CUSTOM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel -):

Frequency (MHz)	435.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	37.66
Conductivity (S/m)	0.91
Variation (%)	0.59

C. SAR Surface And Volume

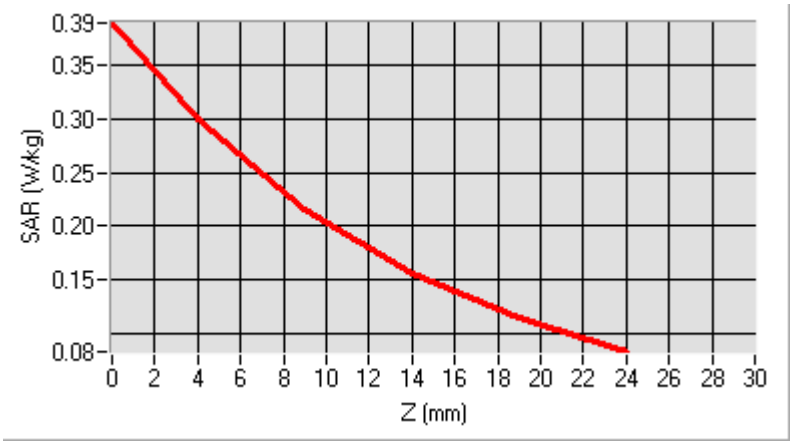
SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=56.00
SAR Peak: 0.39 W/kg

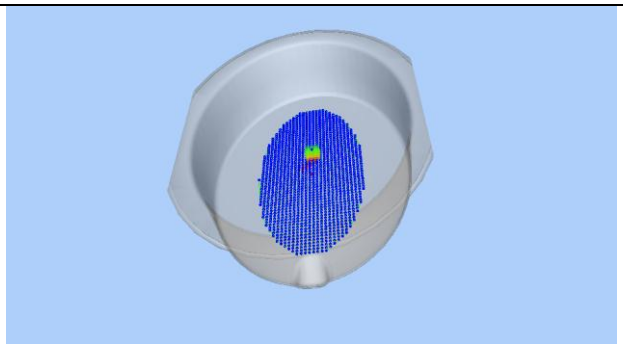
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.217
SAR 1g (W/Kg)	0.310

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at 435 MHz (Body)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Body – Device 4, holster 1

A. Experimental conditions

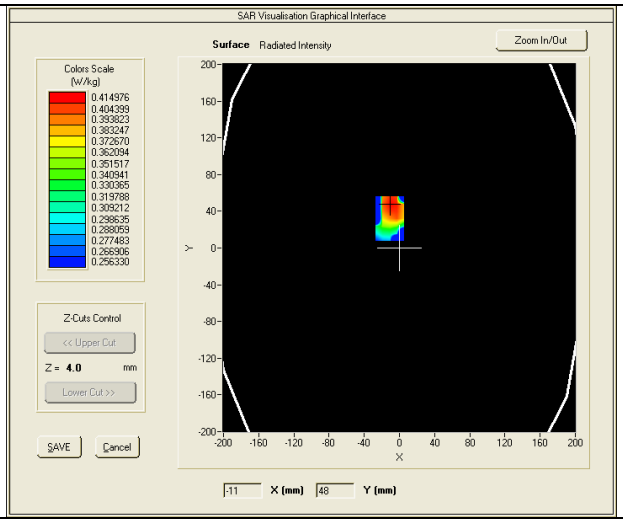
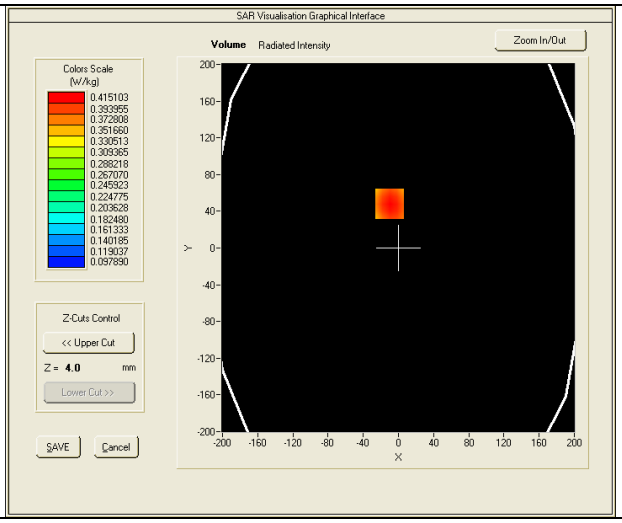
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Elliptical Phantom SN 29/11 ELLI21
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 6.52 DCP: 120, 122, 117 mV
Device Position	Body
Band	CUSTOM
Channels	Low
Signal	CUSTOM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel -):

Frequency (MHz)	435.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	37.66
Conductivity (S/m)	0.91
Variation (%)	0.03

C. SAR Surface And Volume

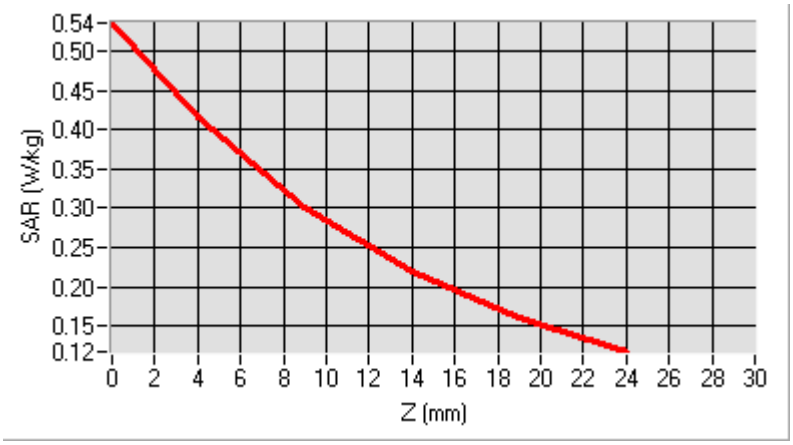
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-10.00, Y=48.00
SAR Peak: 0.54 W/kg

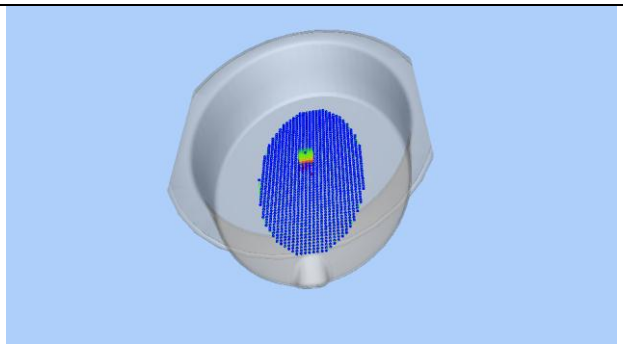
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.305
SAR 1g (W/Kg)	0.430

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at 435 MHz (Body)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Body – Device 1, holster 2

A. Experimental conditions

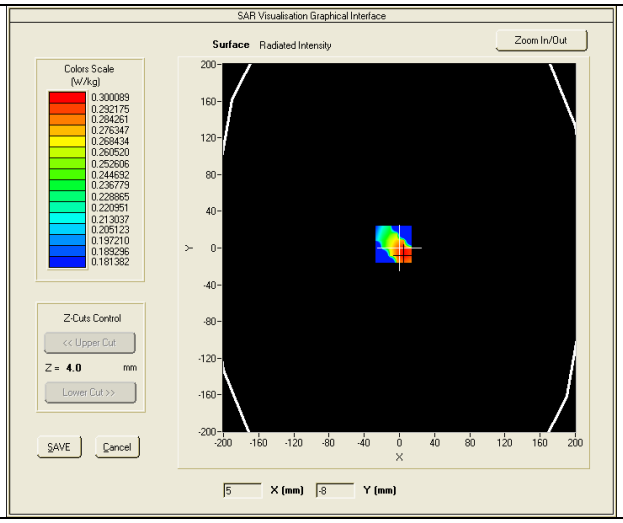
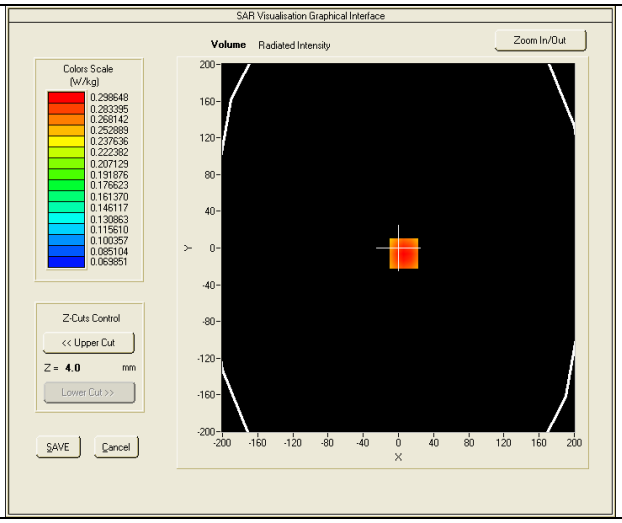
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Elliptical Phantom SN 29/11 ELLI21
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 6.52 DCP: 120, 122, 117 mV
Device Position	Body
Band	CUSTOM
Channels	Low
Signal	CUSTOM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel -):

Frequency (MHz)	435.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	37.66
Conductivity (S/m)	0.91
Variation (%)	-2.43

C. SAR Surface And Volume

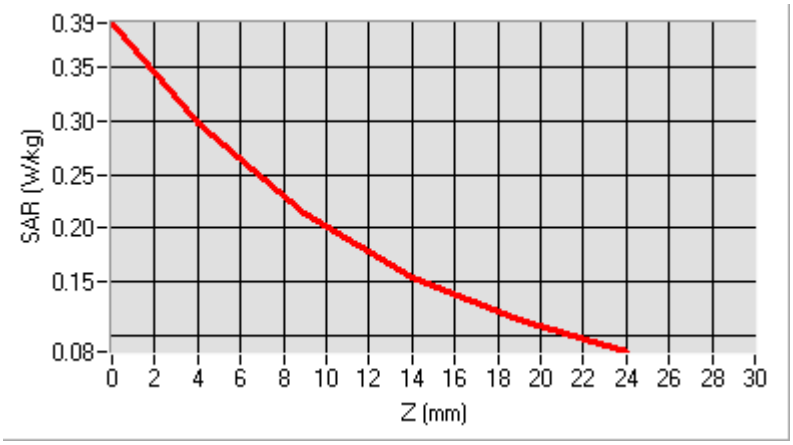
SURFACE SAR	VOLUME SAR
	

Maximum location: X=6.00, Y=-6.00
SAR Peak: 0.39 W/kg

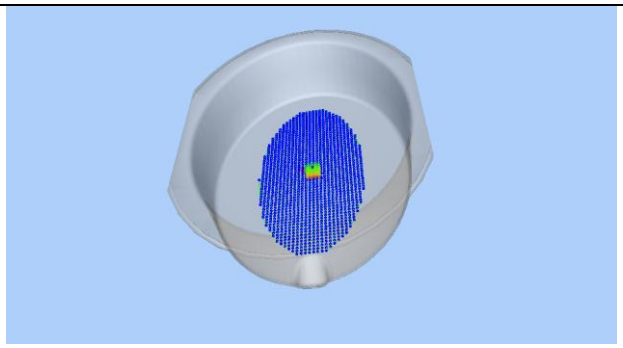
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.217
SAR 1g (W/Kg)	0.309

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at 435 MHz (Body)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Body – Device 1, holster 3, back

A. Experimental conditions

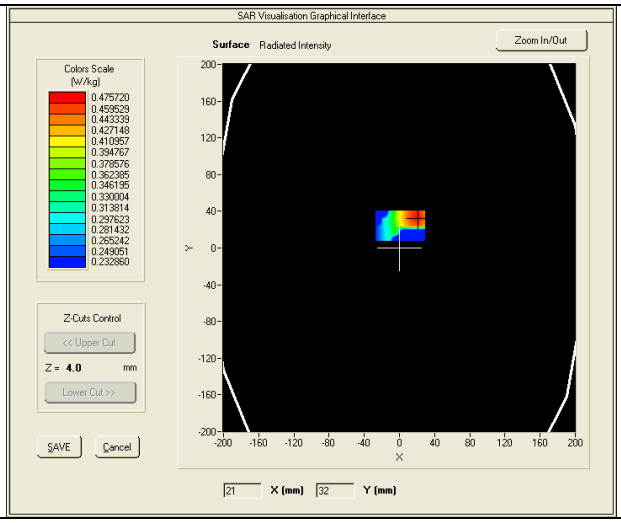
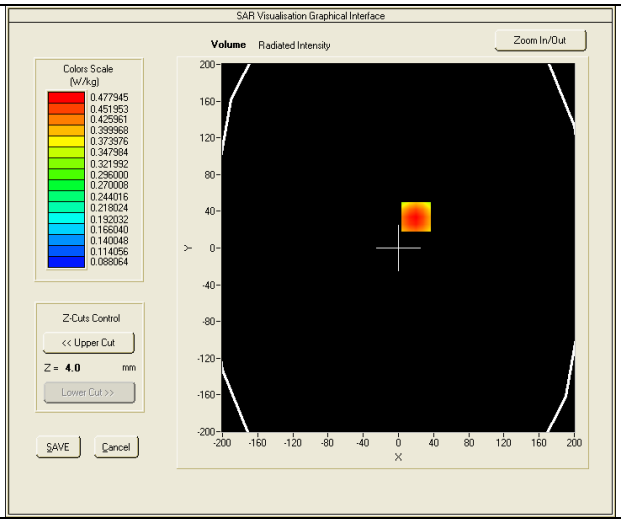
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Elliptical Phantom SN 29/11 ELLI21
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 6.52 DCP: 120, 122, 117 mV
Device Position	Body
Band	CUSTOM
Channels	Low
Signal	CUSTOM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel -):

Frequency (MHz)	435.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	37.66
Conductivity (S/m)	0.91
Variation (%)	-0.18

C. SAR Surface And Volume

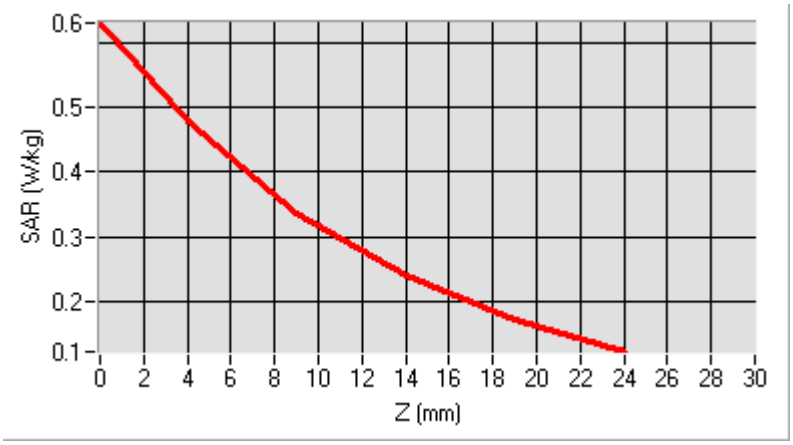
SURFACE SAR	VOLUME SAR
	

Maximum location: X=20.00, Y=34.00
SAR Peak: 0.63 W/kg

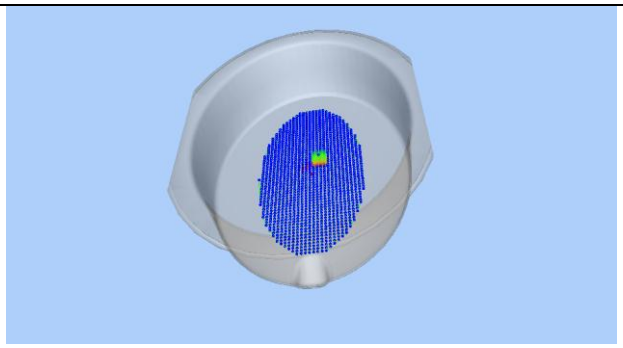
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.337
SAR 1g (W/Kg)	0.494

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at 435 MHz (Body)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Body – Device 1, holster 3, front

A. Experimental conditions

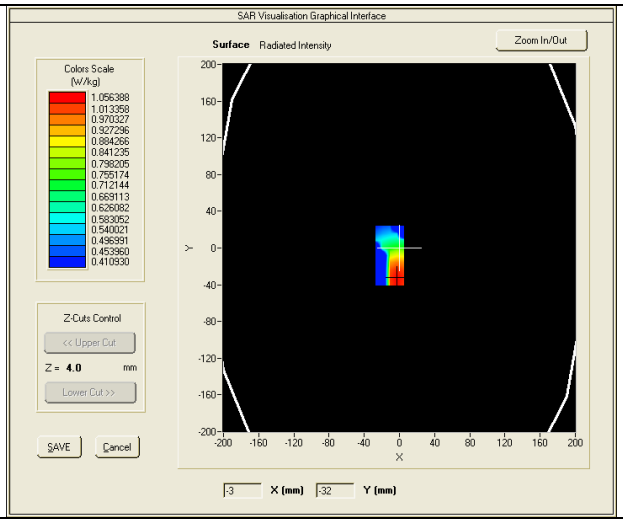
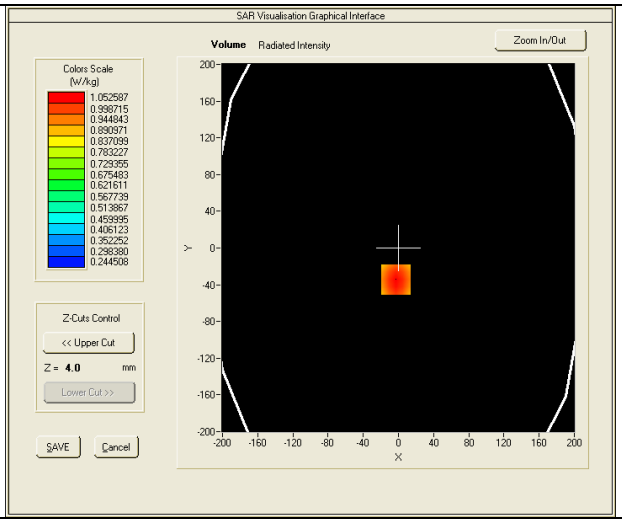
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Elliptical Phantom SN 29/11 ELLI21
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 6.52 DCP: 120, 122, 117 mV
Device Position	Body
Band	CUSTOM
Channels	Low
Signal	CUSTOM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel -):

Frequency (MHz)	435.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	37.66
Conductivity (S/m)	0.91
Variation (%)	-3.30

C. SAR Surface And Volume

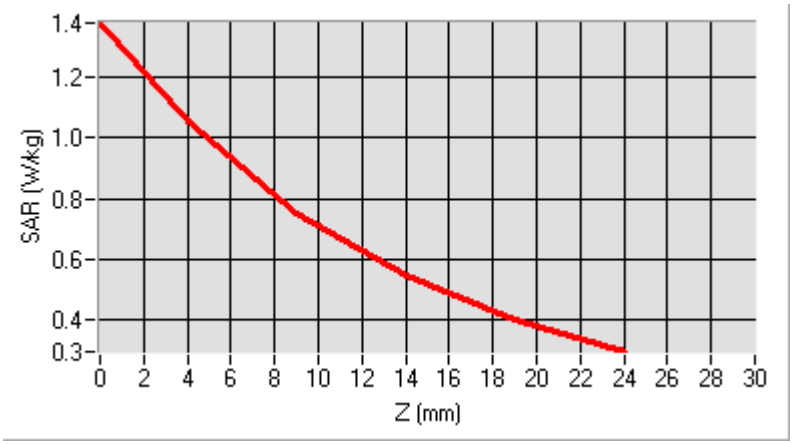
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-3.00, Y=-34.00
SAR Peak: 1.38 W/kg

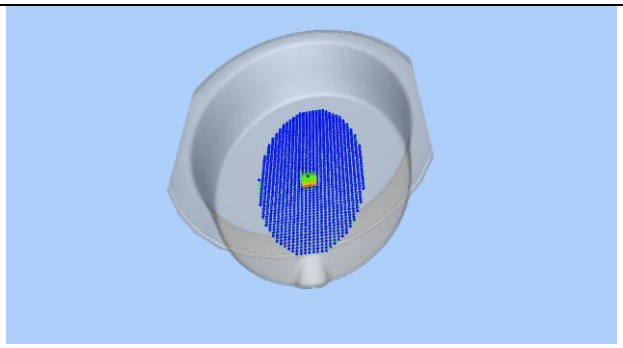
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.764
SAR 1g (W/Kg)	1.090

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at 435 MHz (Body)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Body – Device 1, holster 4

A. Experimental conditions

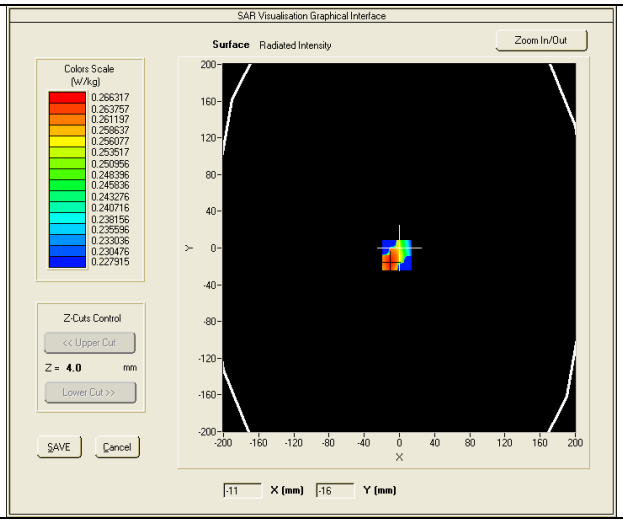
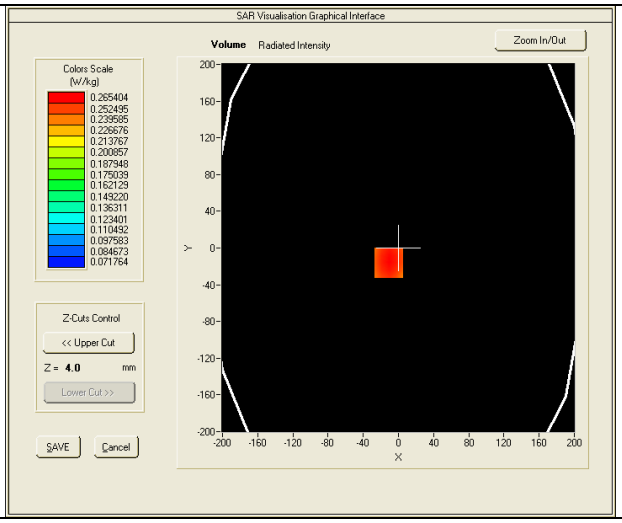
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Elliptical Phantom SN 29/11 ELLI21
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 6.52 DCP: 120, 122, 117 mV
Device Position	Body
Band	CUSTOM
Channels	Low
Signal	CUSTOM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel -):

Frequency (MHz)	435.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	37.66
Conductivity (S/m)	0.91
Variation (%)	-0.35

C. SAR Surface And Volume

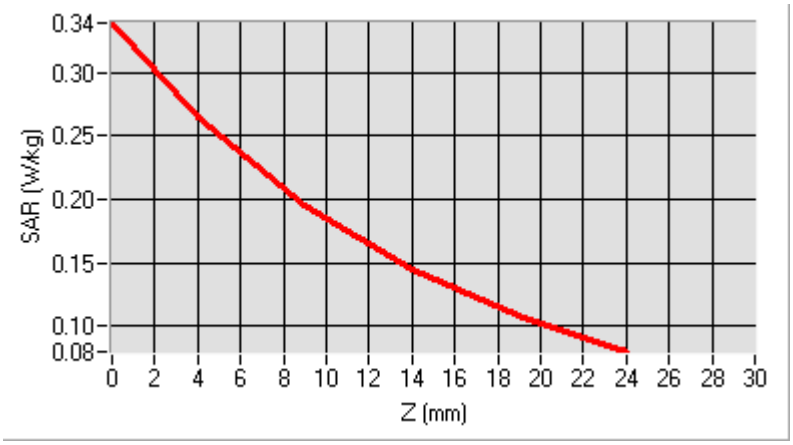
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-11.00, Y=-16.00
SAR Peak: 0.34 W/kg

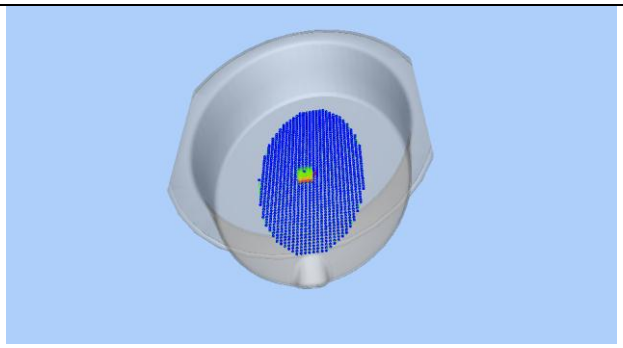
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.199
SAR 1g (W/Kg)	0.276

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at IEEE 802.11b band (Body)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Body – Device 1, holster 3, front

A. Experimental conditions

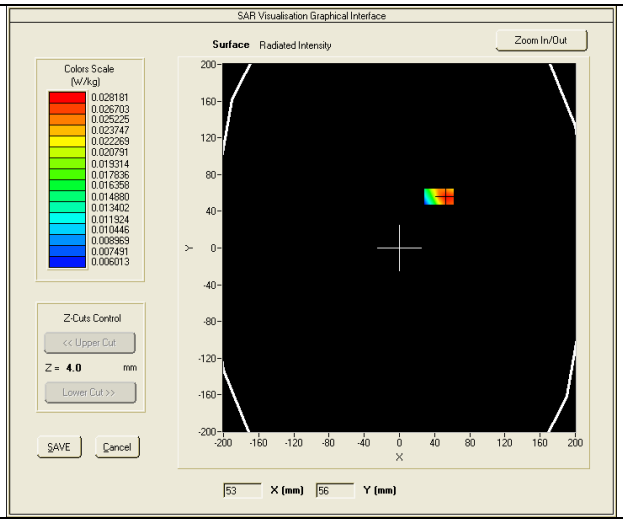
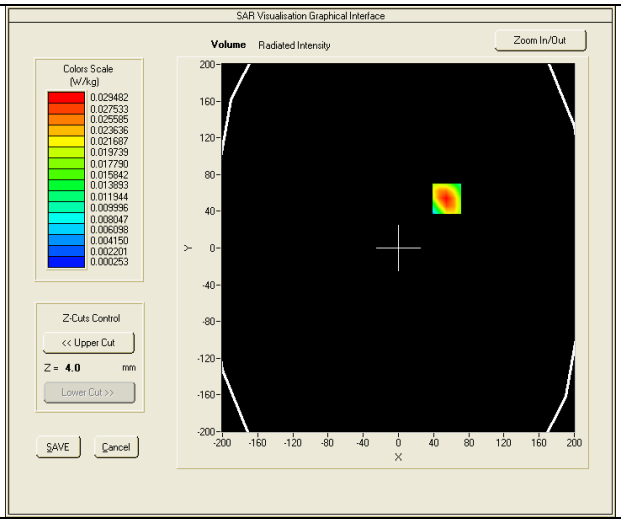
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Elliptical Phantom SN 29/11 ELLI21
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 4.90 DCP: 120, 122, 117 mV
Device Position	Body
Band	IEEE 802.11b
Channels	Middle
Signal	DSSS (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel 6):

Frequency (MHz)	2437.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	14.07
Conductivity (S/m)	1.90
Variation (%)	-0.44

C. SAR Surface And Volume

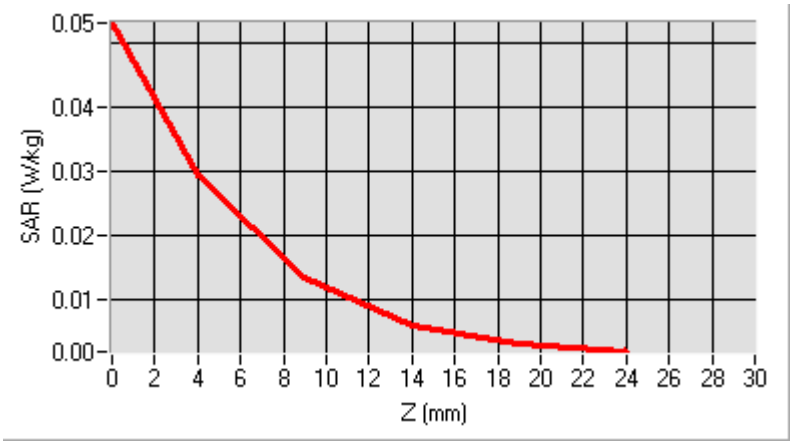
SURFACE SAR	VOLUME SAR
	

Maximum location: X=55.00, Y=54.00
SAR Peak: 0.05 W/kg

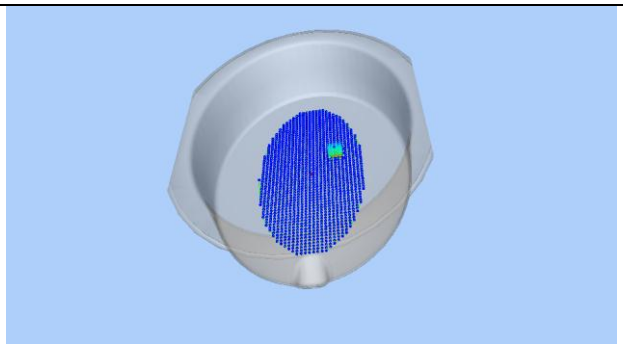
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.014
SAR 1g (W/Kg)	0.028

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at IEEE 802.11b band (Body)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Body – Device 1, holster 1

A. Experimental conditions

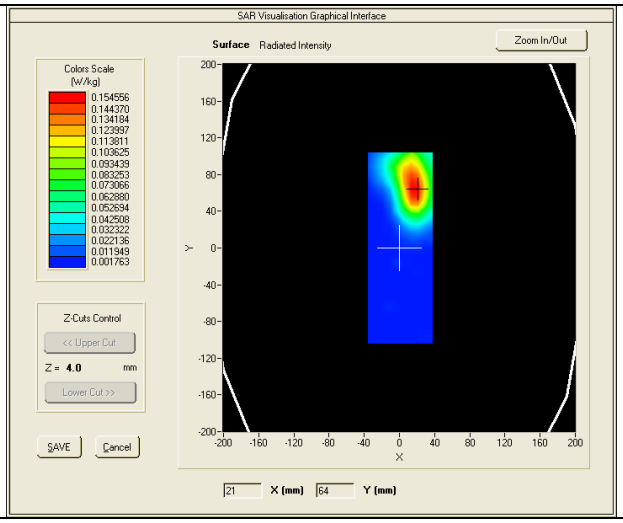
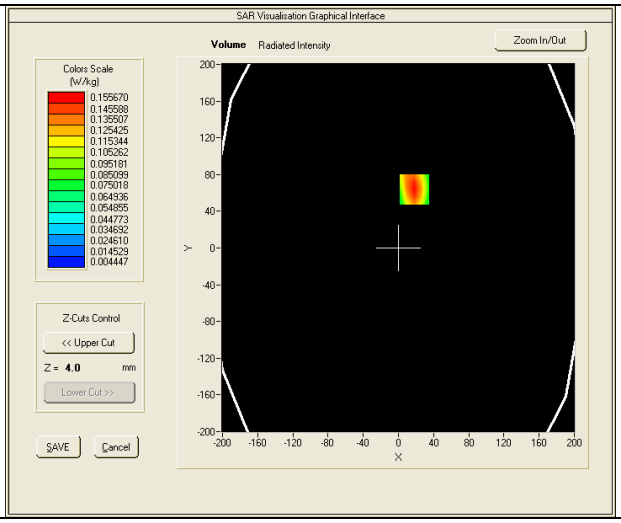
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Elliptical Phantom SN 29/11 ELLI21
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 4.90 DCP: 120, 122, 117 mV
Device Position	Body
Band	IEEE 802.11b
Channels	Middle
Signal	DSSS (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel 6):

Frequency (MHz)	2437.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	14.07
Conductivity (S/m)	1.90
Variation (%)	-3.83

C. SAR Surface And Volume

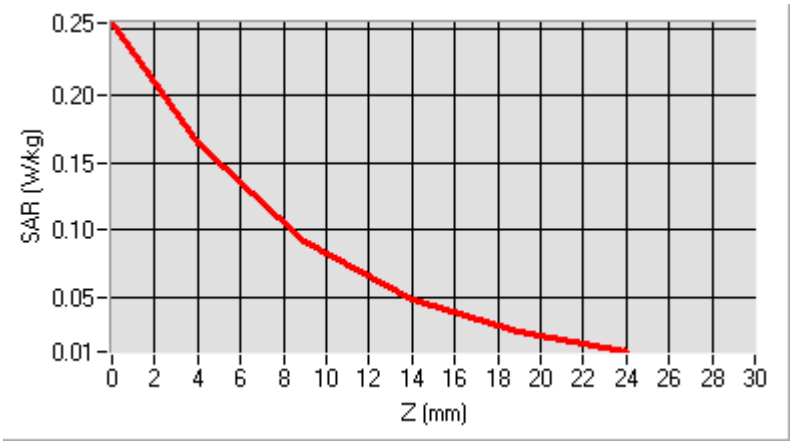
SURFACE SAR	VOLUME SAR
	

Maximum location: X=18.00, Y=64.00
SAR Peak: 0.25 W/kg

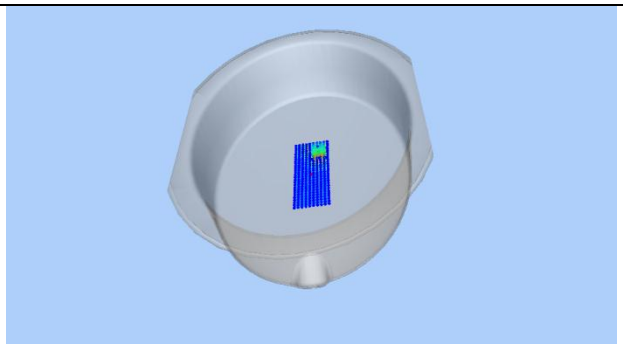
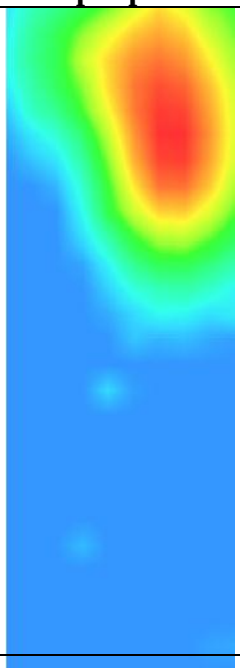
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.087
SAR 1g (W/Kg)	0.162

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at IEEE 802.11g band (Body)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Body – Device 1, holster 1

A. Experimental conditions

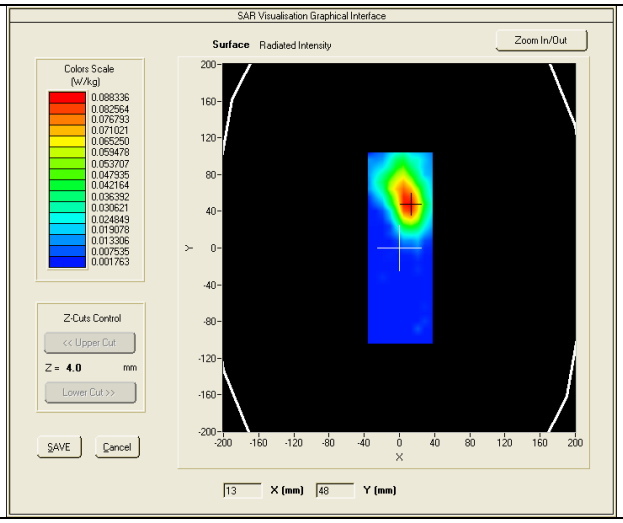
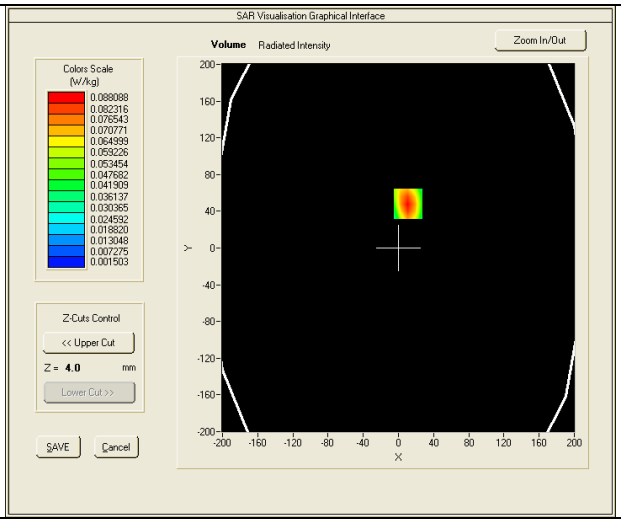
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Elliptical Phantom SN 29/11 ELLI21
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 4.90 DCP: 120, 122, 117 mV
Device Position	Body
Band	IEEE 802.11g
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel 6):

Frequency (MHz)	2437.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	14.07
Conductivity (S/m)	1.90
Variation (%)	-1.41

C. SAR Surface And Volume

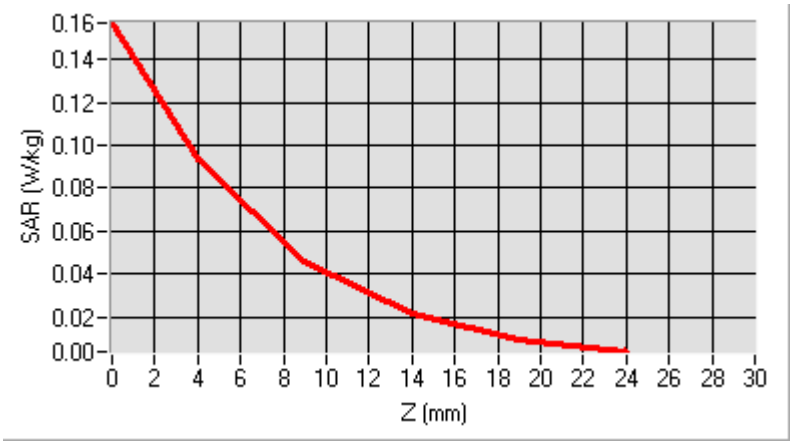
SURFACE SAR	VOLUME SAR
	

Maximum location: X=11.00, Y=48.00
SAR Peak: 0.16 W/kg

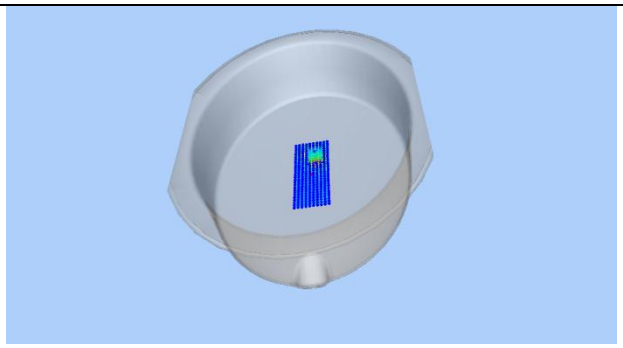
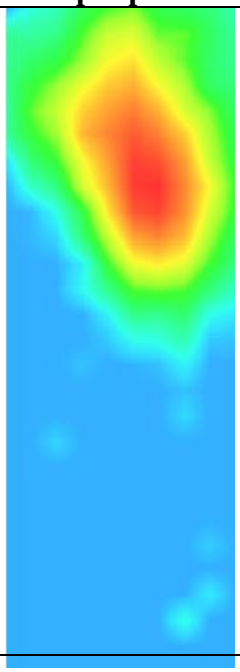
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.046
SAR 1g (W/Kg)	0.092

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at IEEE 802.11n band (Body)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Body – Device 1, holster 1

A. Experimental conditions

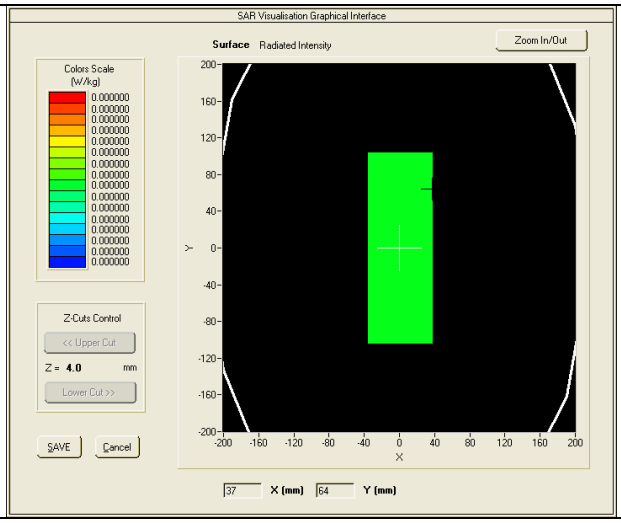
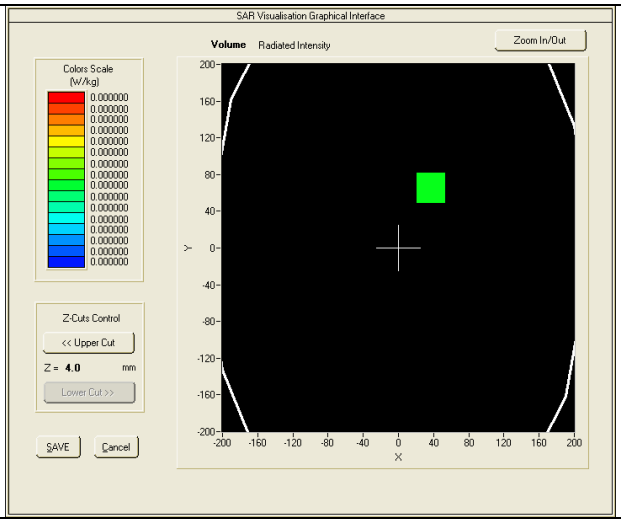
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	Elliptical Phantom SN 29/11 ELLI21
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 4.90 DCP: 120, 122, 117 mV
Device Position	Body
Band	IEEE 802.11n
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel 6):

Frequency (MHz)	2437.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	14.07
Conductivity (S/m)	1.90
Variation (%)	-0.76

C. SAR Surface And Volume

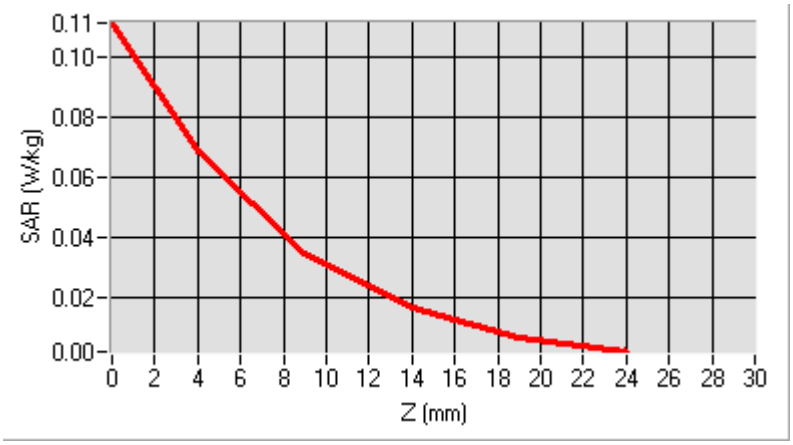
SURFACE SAR	VOLUME SAR
	

Maximum location: X=37.00, Y=66.00
SAR Peak: 0.12 W/kg

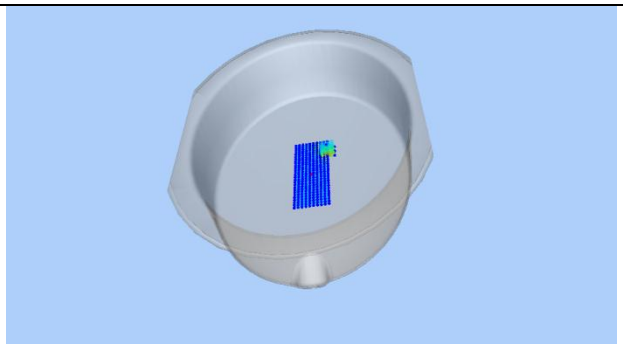
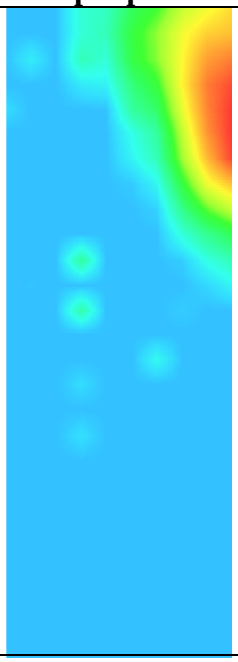
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.034
SAR 1g (W/Kg)	0.068

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at IEEE 802.11n band (Body)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Body – Device 1, holster 1

A. Experimental conditions

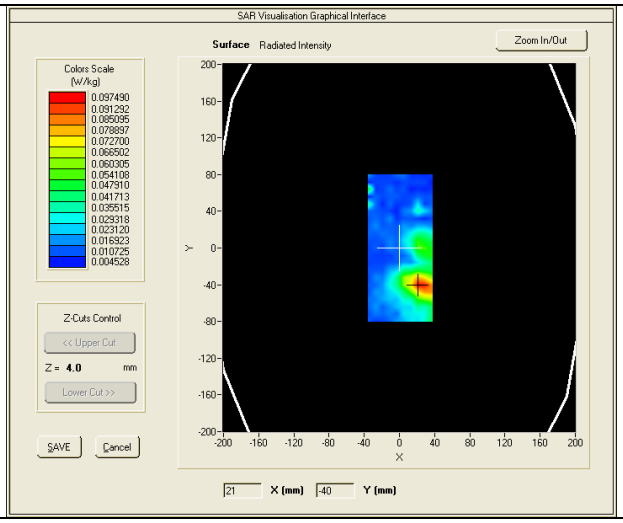
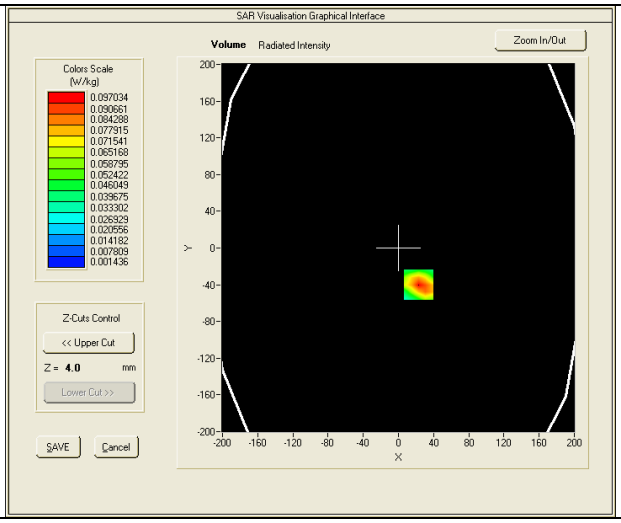
Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	Elliptical Phantom SN 29/11 ELLI21
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 4.19 DCP: 120, 122, 117 mV
Device Position	Body
Band	IEEE 802.11n
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel 100):

Frequency (MHz)	5500.00
Relative permittivity (real part)	36.98
Relative permittivity (imaginary part)	16.43
Conductivity (S/m)	5.02
Variation (%)	-1.49

C. SAR Surface And Volume

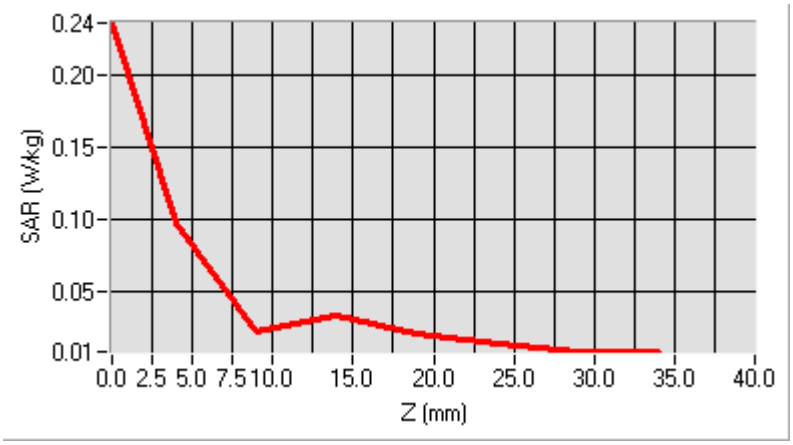
SURFACE SAR	VOLUME SAR
	

Maximum location: X=23.00, Y=-40.00
SAR Peak: 0.22 W/kg

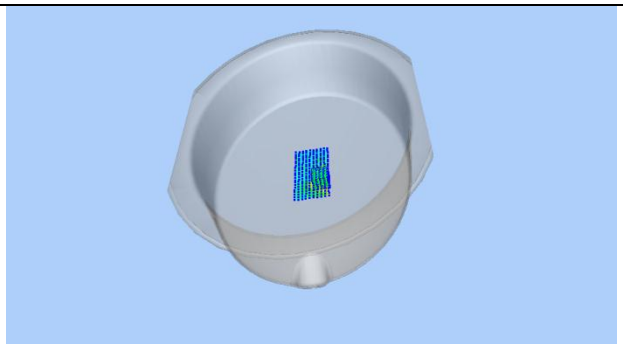
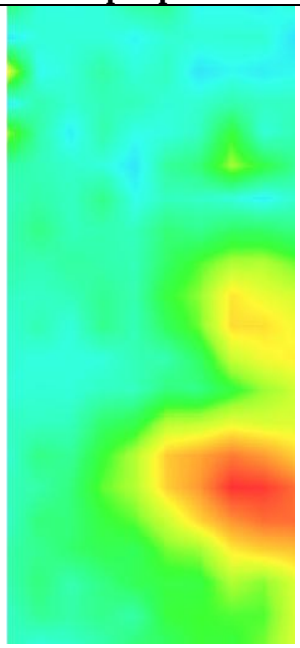
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.084
SAR 1g (W/Kg)	0.104

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at 435 MHz (Head)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Right Cheek – Device 1, no holster

A. Experimental conditions

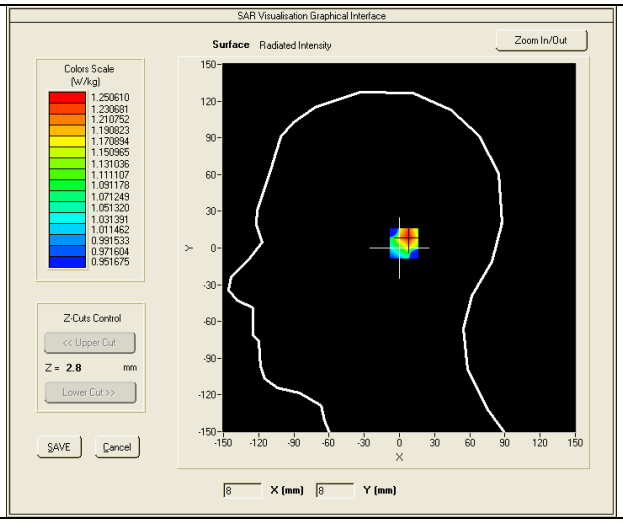
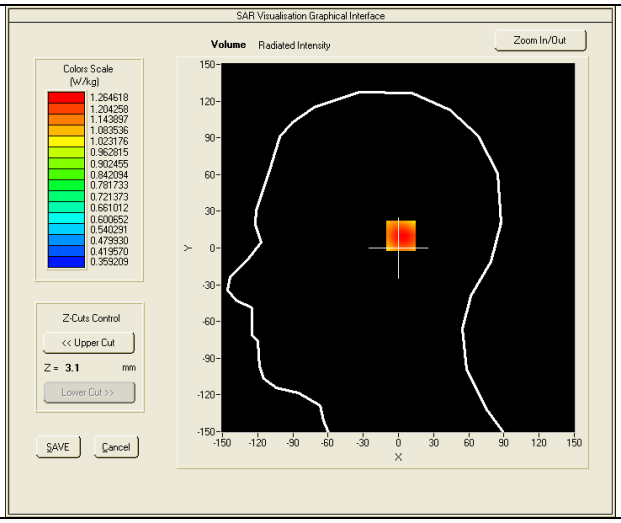
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	SAM Phantom SN 13/09 SAM68
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 6.52 DCP: 120, 122, 117 mV
Device Position	Right Cheek
Band	CUSTOM
Channels	Low
Signal	CUSTOM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel -):

Frequency (MHz)	435.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	37.66
Conductivity (S/m)	0.91
Variation (%)	-0.50

C. SAR Surface And Volume

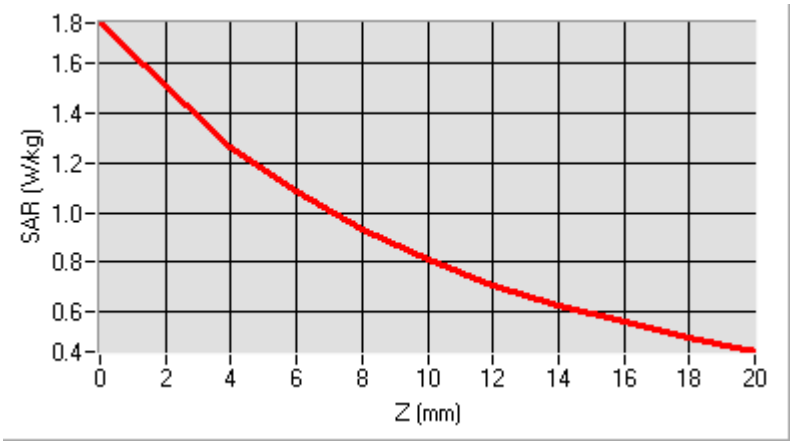
SURFACE SAR	VOLUME SAR
	

Maximum location: X=7.00, Y=10.00
SAR Peak: 1.78 W/kg

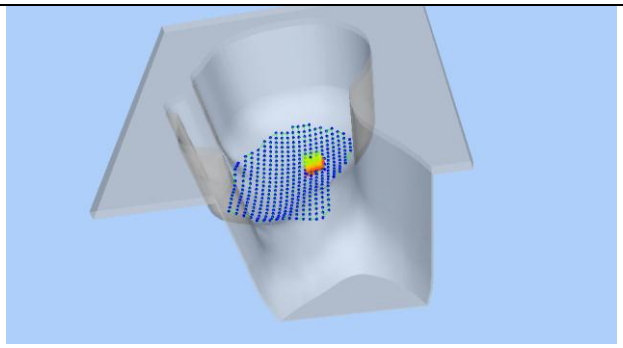
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.880
SAR 1g (W/Kg)	1.289

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at 435 MHz (Head)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Right Tilt – Device 1, no holster

A. Experimental conditions

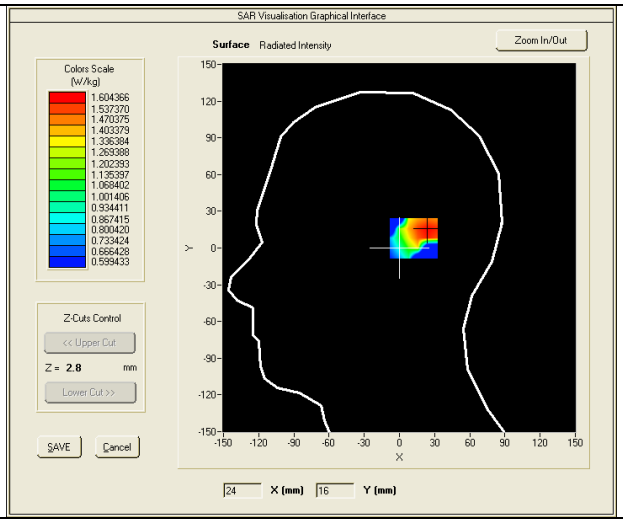
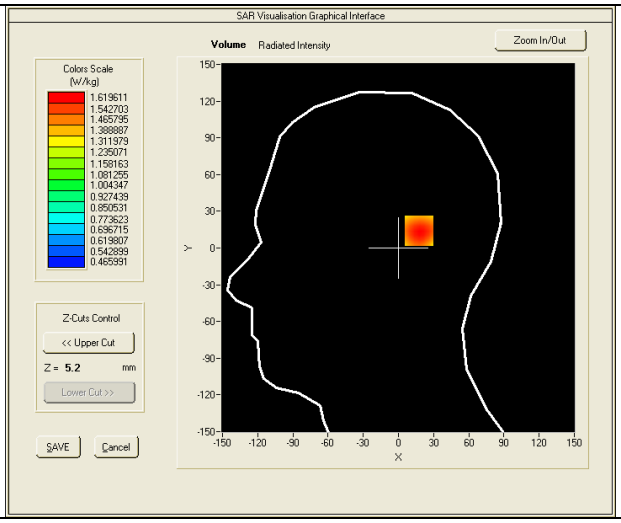
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	SAM Phantom SN 13/09 SAM68
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 6.52 DCP: 120, 122, 117 mV
Device Position	Right Tilt
Band	CUSTOM
Channels	Low
Signal	CUSTOM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel -):

Frequency (MHz)	435.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	37.66
Conductivity (S/m)	0.91
Variation (%)	2.43

C. SAR Surface And Volume

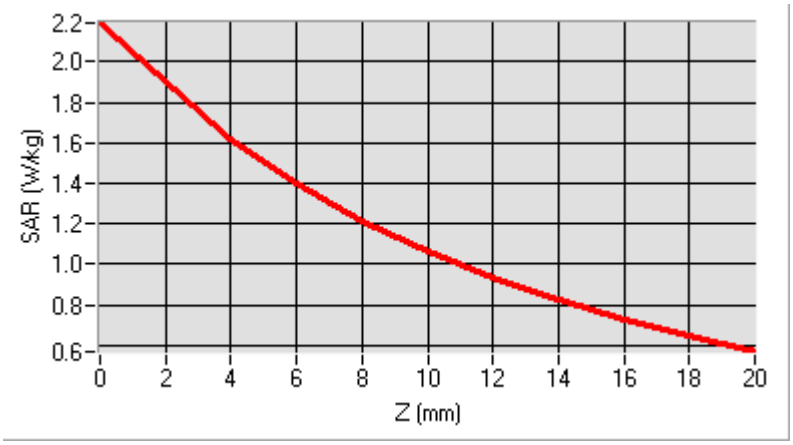
SURFACE SAR	VOLUME SAR
	

Maximum location: X=24.00, Y=14.00
SAR Peak: 2.25 W/kg

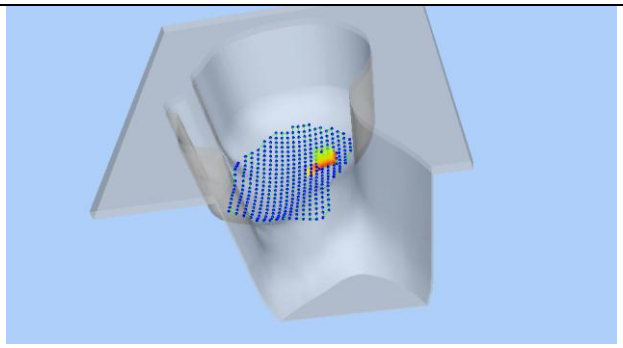
D. SAR 1g & 10g

SAR 10g (W/Kg)	1.130
SAR 1g (W/Kg)	1.656

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at 435 MHz (Head)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Left Cheek – Device 1, no holster

A. Experimental conditions

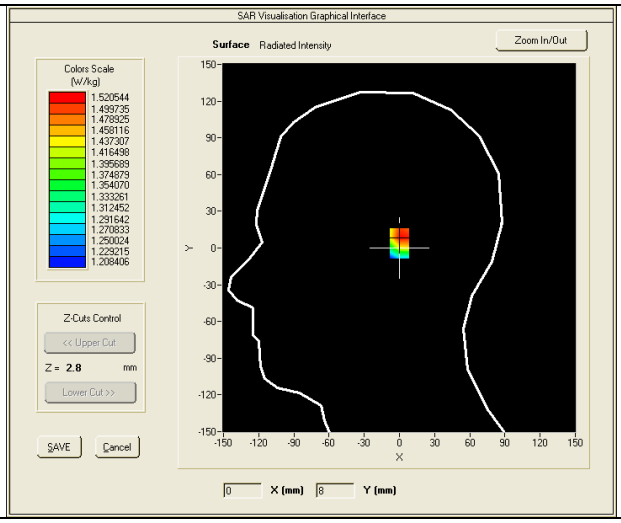
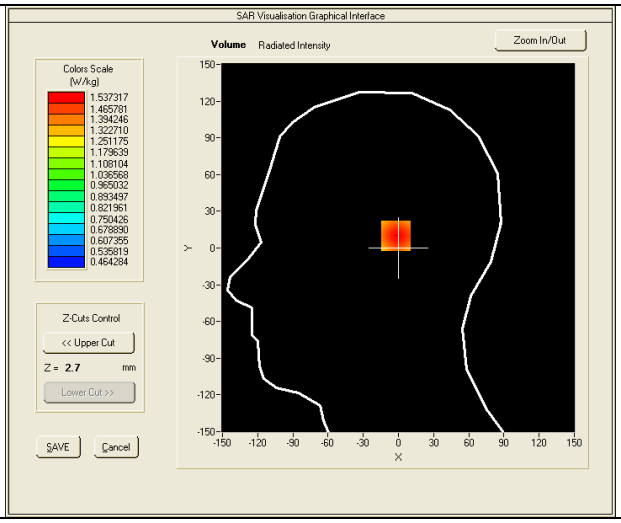
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	SAM Phantom SN 13/09 SAM68
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 μV/(V/m)^2 ConvF: 6.52 DCP: 120, 122, 117 mV
Device Position	Left Cheek
Band	CUSTOM
Channels	Low
Signal	CUSTOM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel -):

Frequency (MHz)	435.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	37.66
Conductivity (S/m)	0.91
Variation (%)	0.53

C. SAR Surface And Volume

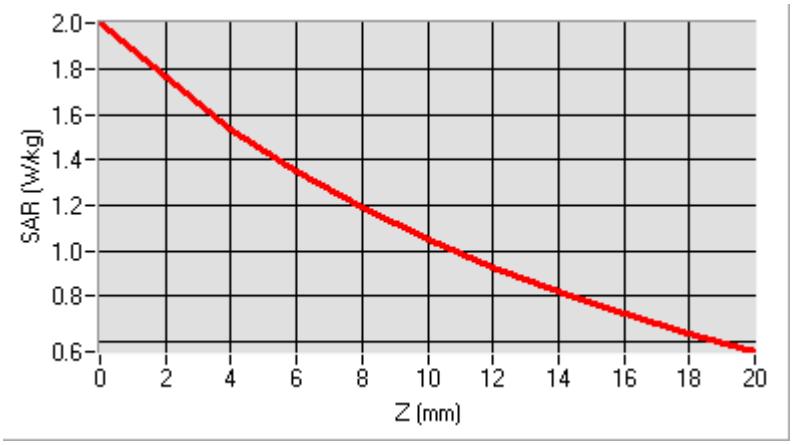
SURFACE SAR	VOLUME SAR
	

Maximum location: X=2.00, Y=10.00
SAR Peak: 2.02 W/kg

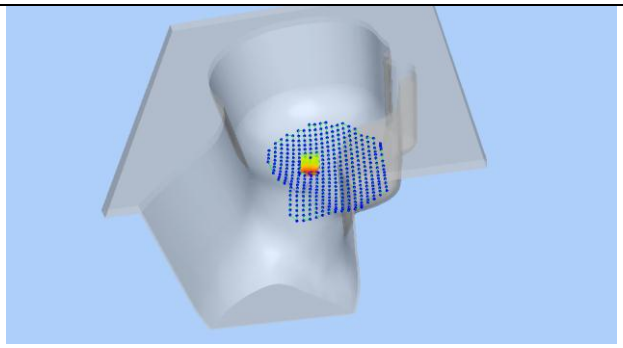
D. SAR 1g & 10g

SAR 10g (W/Kg)	1.092
SAR 1g (W/Kg)	1.563

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at 435 MHz (Head)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Left Tilt – Device 1, no holster

A. Experimental conditions

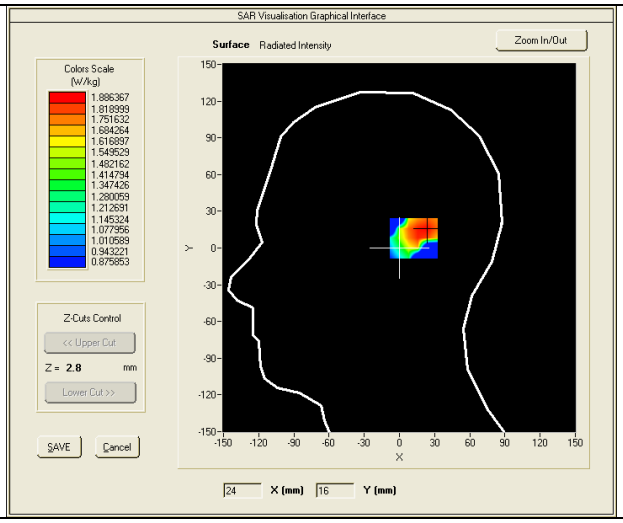
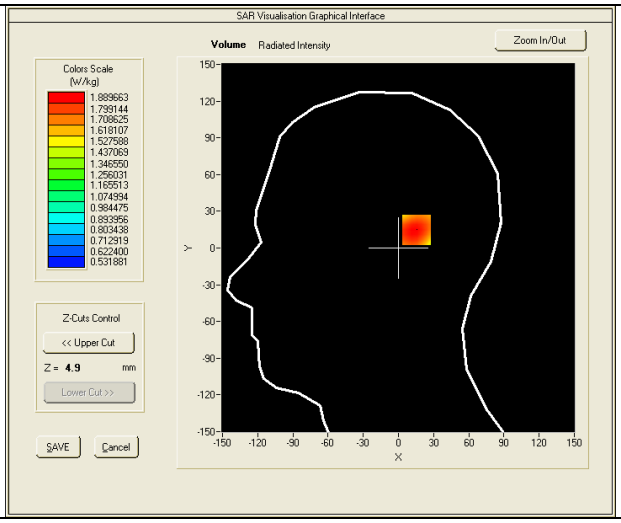
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	SAM Phantom SN 13/09 SAM68
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 6.52 DCP: 120, 122, 117 mV
Device Position	Left Tilt
Band	CUSTOM
Channels	Low
Signal	CUSTOM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel -):

Frequency (MHz)	435.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	37.66
Conductivity (S/m)	0.91
Variation (%)	0.83

C. SAR Surface And Volume

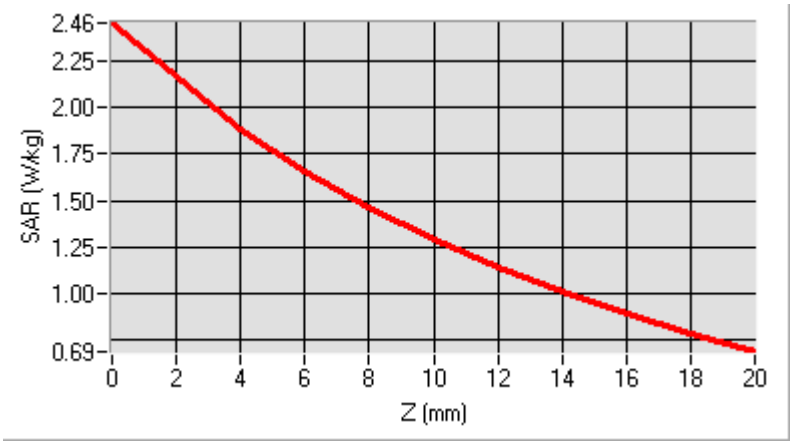
SURFACE SAR	VOLUME SAR
	

Maximum location: X=22.00, Y=15.00
SAR Peak: 2.54 W/kg

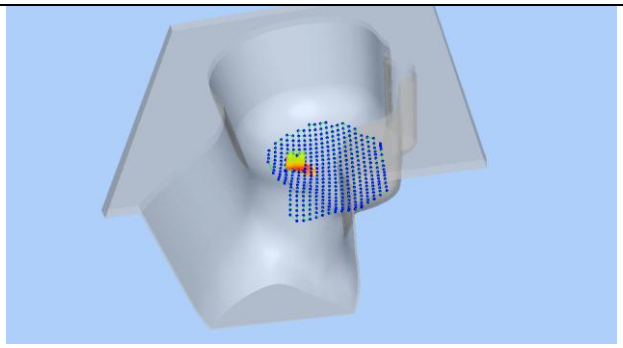
D. SAR 1g & 10g

SAR 10g (W/Kg)	1.346
SAR 1g (W/Kg)	1.937

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at IEEE 802.11b band (Head)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Right Cheek – Device 1, no holster

A. Experimental conditions

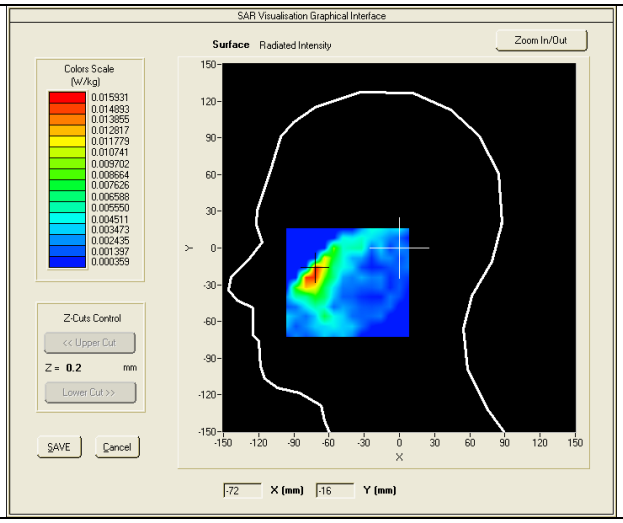
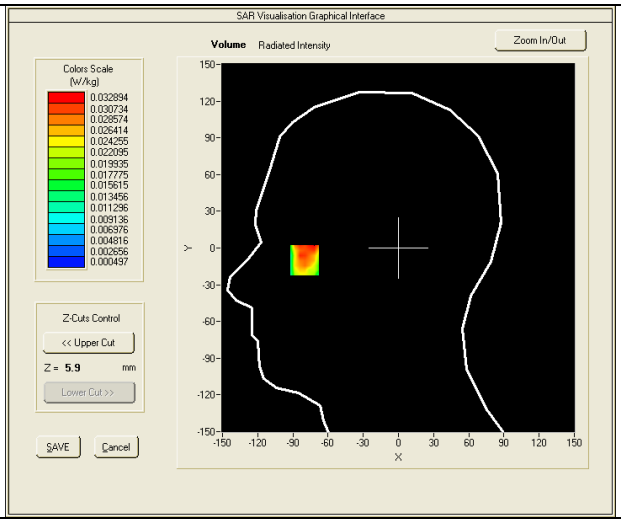
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	SAM Phantom SN 13/09 SAM68
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 μV/(V/m)^2 ConvF: 4.90 DCP: 120, 122, 117 mV
Device Position	Right Cheek
Band	IEEE 802.11b
Channels	Middle
Signal	DSSS (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel 6):

Frequency (MHz)	2437.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	14.07
Conductivity (S/m)	1.90
Variation (%)	-1.24

C. SAR Surface And Volume

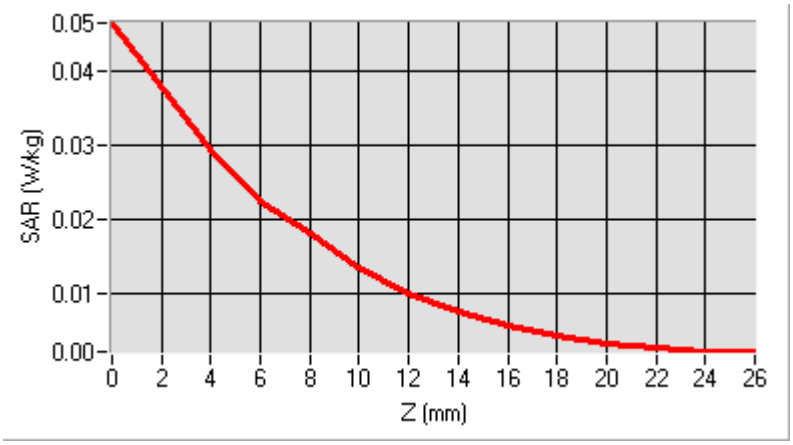
SURFACE SAR	VOLUME SAR
	

Maximum location: X=80.00, Y=-8.00
SAR Peak: 0.06 W/kg

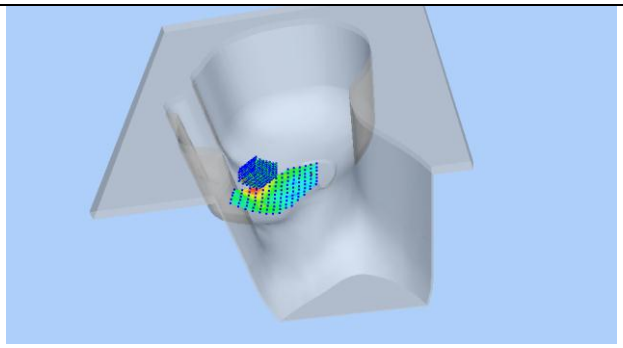
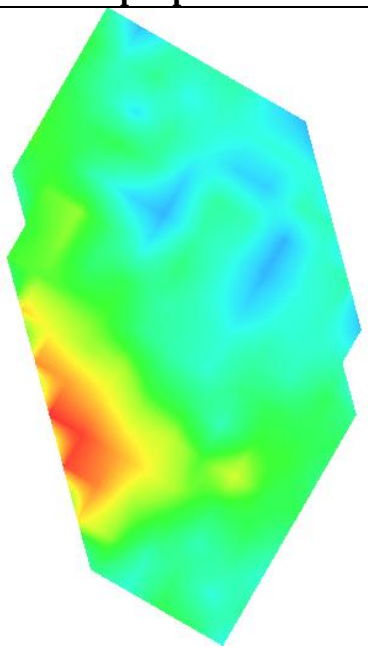
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.016
SAR 1g (W/Kg)	0.030

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at IEEE 802.11b band (Head)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Right Tilt – Device 1, no holster

A. Experimental conditions

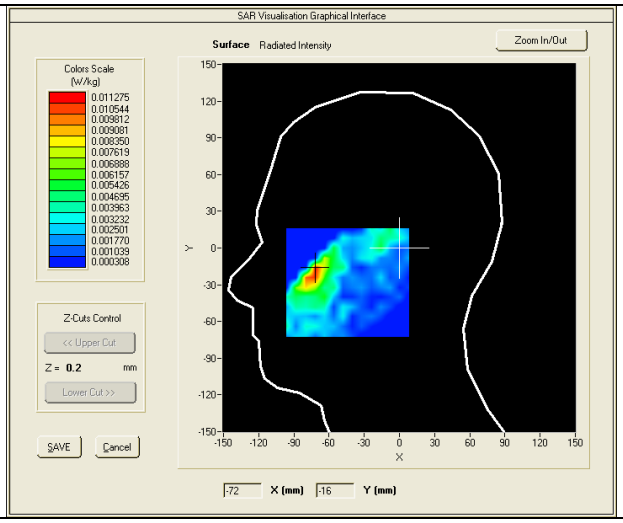
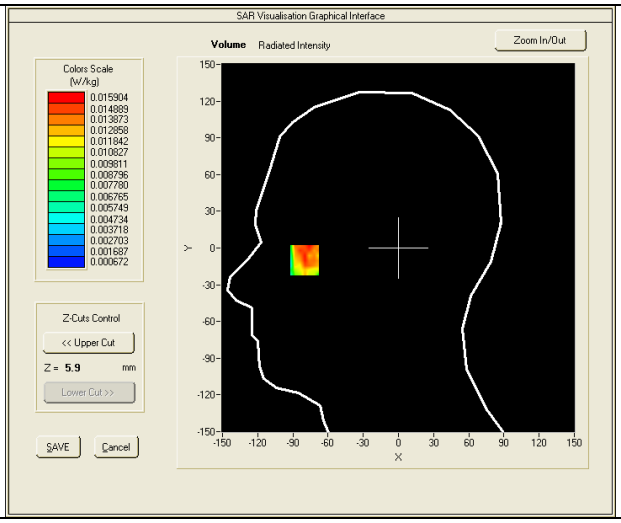
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	SAM Phantom SN 13/09 SAM68
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 4.90 DCP: 120, 122, 117 mV
Device Position	Right Tilt
Band	IEEE 802.11b
Channels	Middle
Signal	DSSS (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel 6):

Frequency (MHz)	2437.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	14.07
Conductivity (S/m)	1.90
Variation (%)	-1.76

C. SAR Surface And Volume

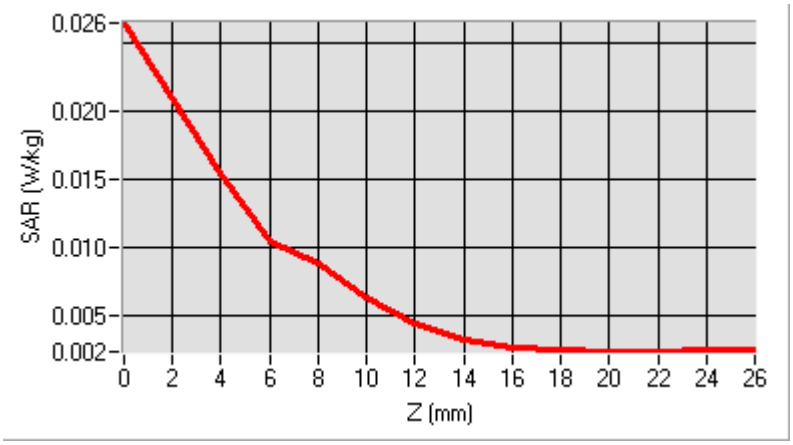
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-80.00, Y=-8.00
SAR Peak: 0.03 W/kg

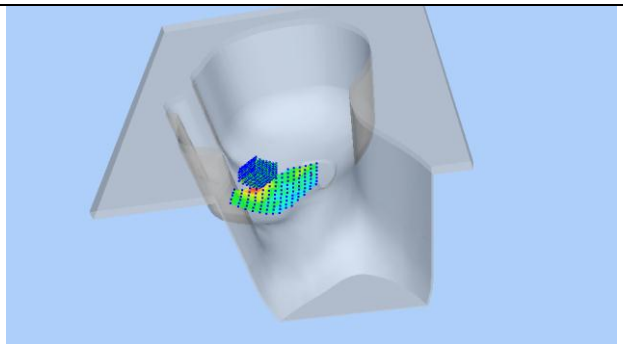
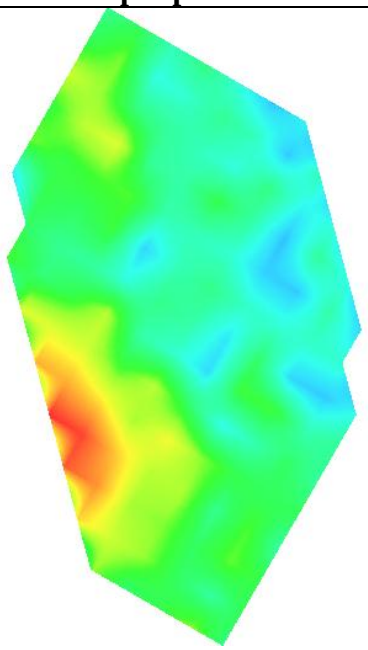
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.008
SAR 1g (W/Kg)	0.015

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at IEEE 802.11b band (Head)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Left Cheek – Device 1, no holster

A. Experimental conditions

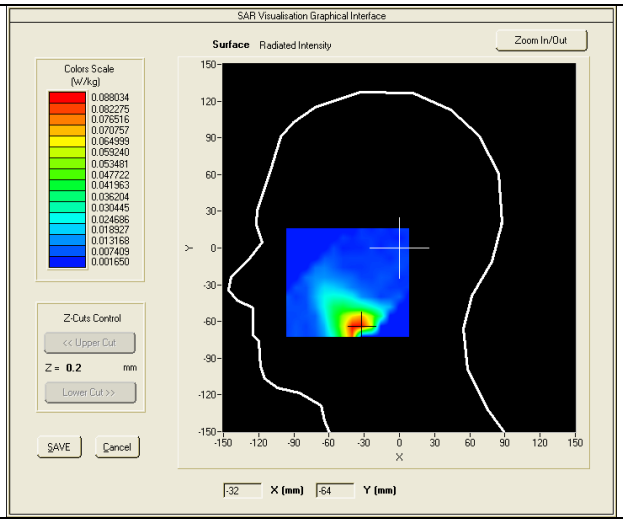
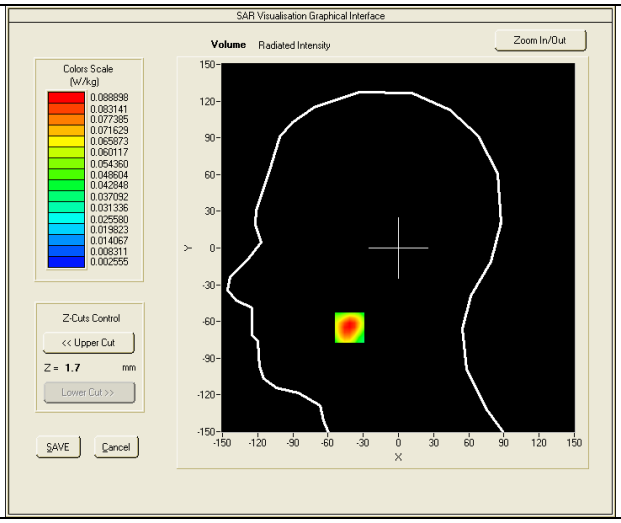
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	SAM Phantom SN 13/09 SAM68
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 4.90 DCP: 120, 122, 117 mV
Device Position	Left Cheek
Band	IEEE 802.11b
Channels	Middle
Signal	DSSS (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel 6):

Frequency (MHz)	2437.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	14.07
Conductivity (S/m)	1.90
Variation (%)	-2.92

C. SAR Surface And Volume

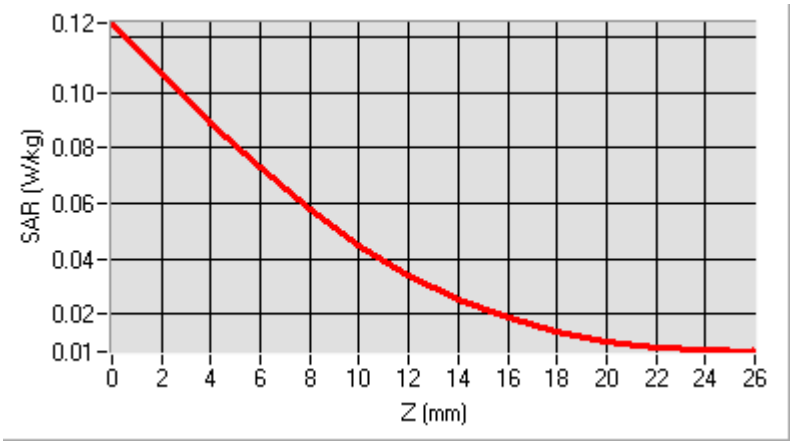
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-35.00, Y=-65.00
SAR Peak: 0.14 W/kg

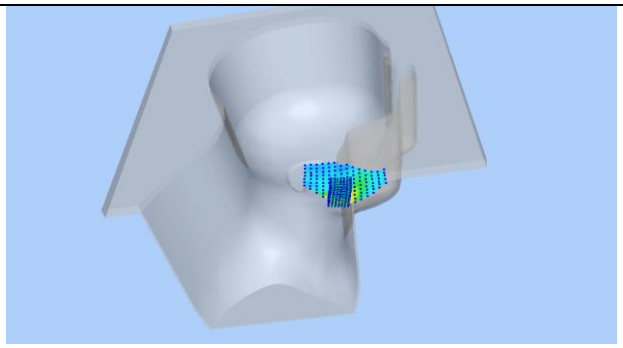
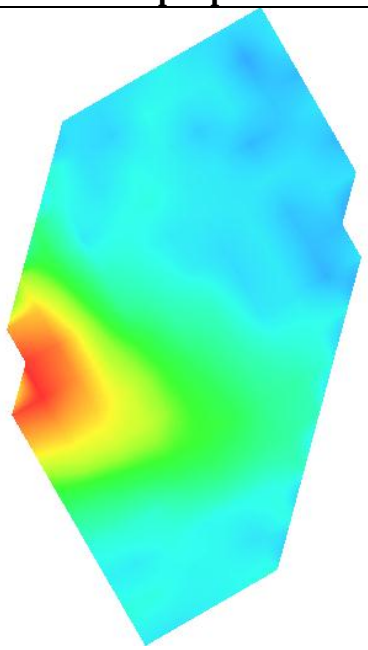
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.044
SAR 1g (W/Kg)	0.085

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at IEEE 802.11b band (Head)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Left Tilt – Device 1, no holster

A. Experimental conditions

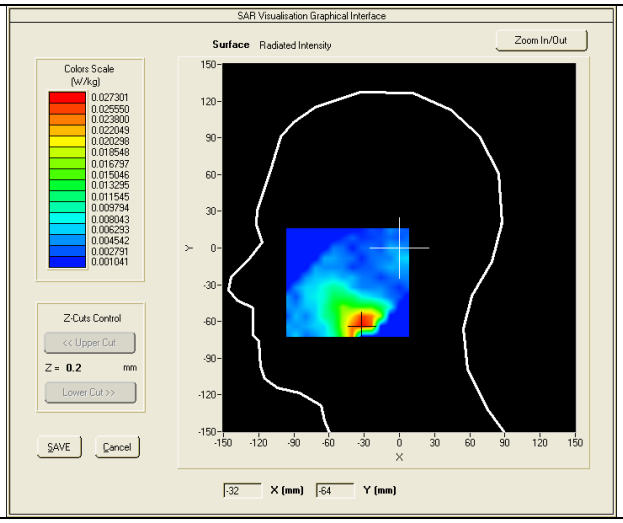
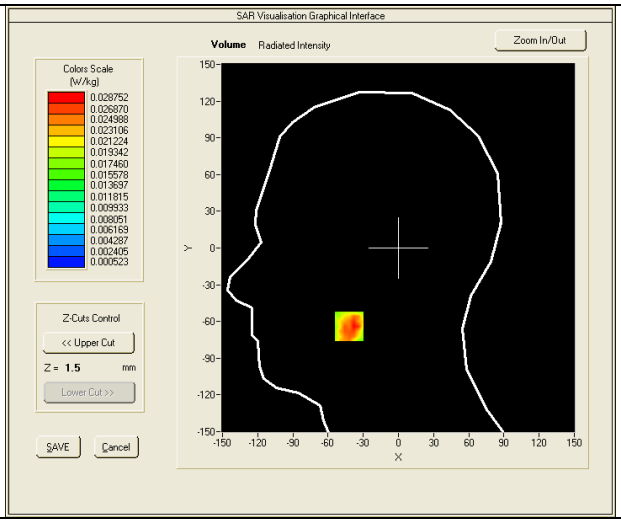
Area Scan	dx=8mm dy=8mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete
Phantom	SAM Phantom SN 13/09 SAM68
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 4.90 DCP: 120, 122, 117 mV
Device Position	Left Tilt
Band	IEEE 802.11b
Channels	Middle
Signal	DSSS (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel 6):

Frequency (MHz)	2437.00
Relative permittivity (real part)	44.24
Relative permittivity (imaginary part)	14.07
Conductivity (S/m)	1.90
Variation (%)	-1.60

C. SAR Surface And Volume

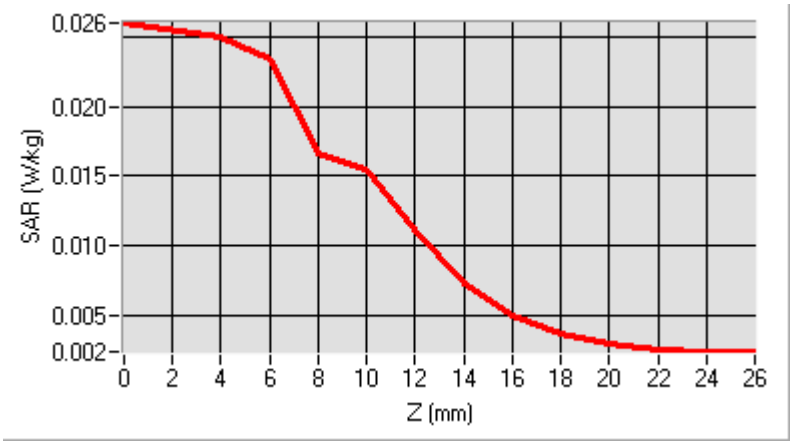
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-32.00, Y=-64.00
SAR Peak: 0.05 W/kg

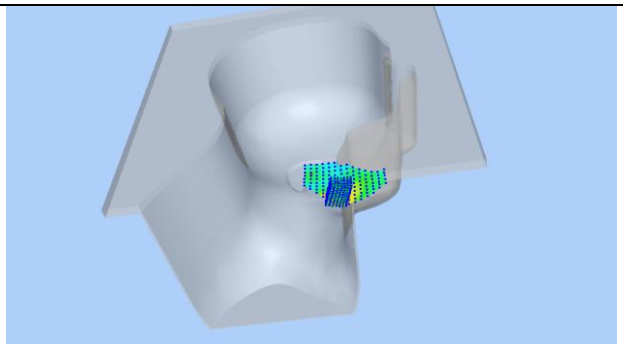
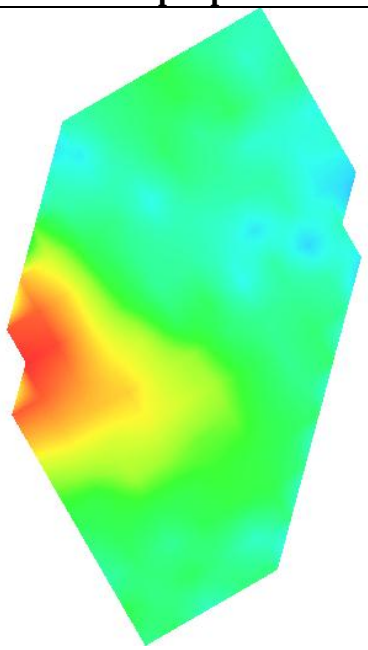
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.014
SAR 1g (W/Kg)	0.027

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at IEEE 802.11n band (Head)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Right Cheek – Device 1, no holster

A. Experimental conditions

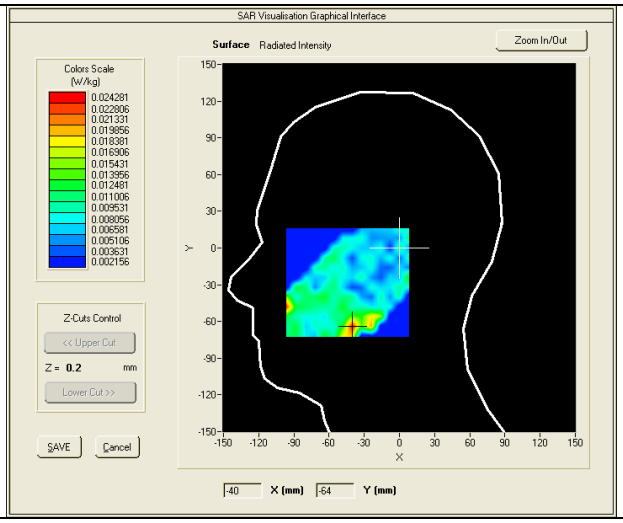
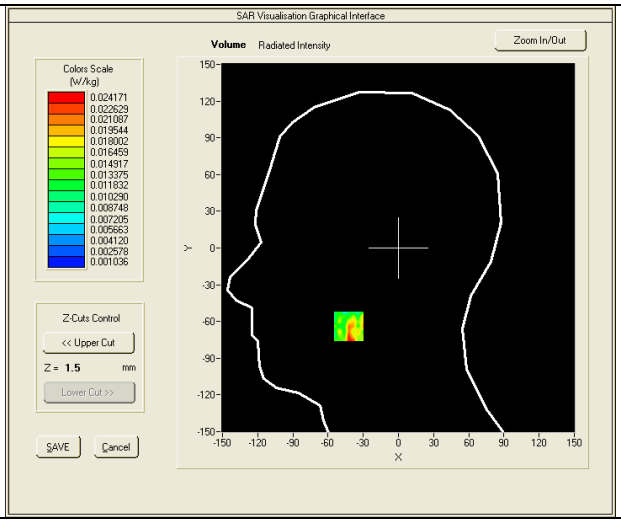
Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	SAM Phantom SN 13/09 SAM68
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 $\mu V/(V/m)^2$ ConvF: 4.19 DCP: 120, 122, 117 mV
Device Position	Right Cheek
Band	IEEE 802.11n
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel 100):

Frequency (MHz)	5500.00
Relative permittivity (real part)	36.98
Relative permittivity (imaginary part)	16.43
Conductivity (S/m)	5.02
Variation (%)	-3.73

C. SAR Surface And Volume

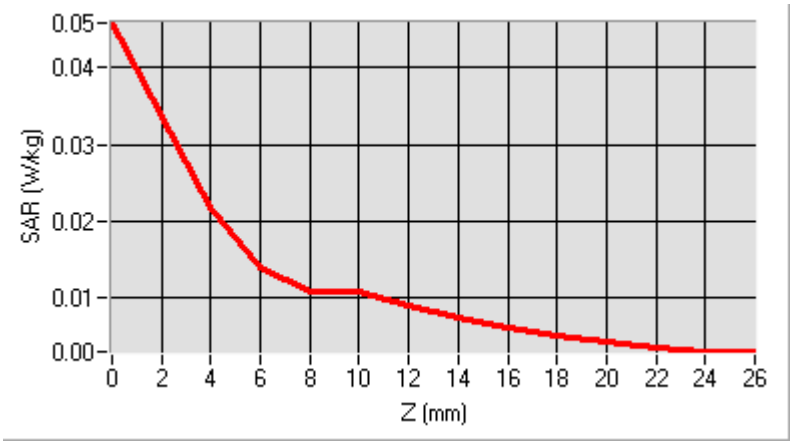
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-40.00, Y=-64.00
SAR Peak: 0.06 W/kg

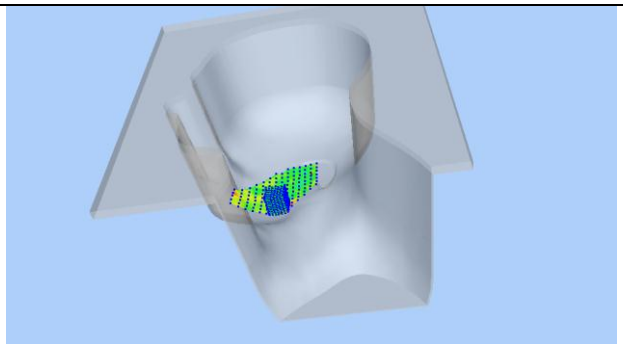
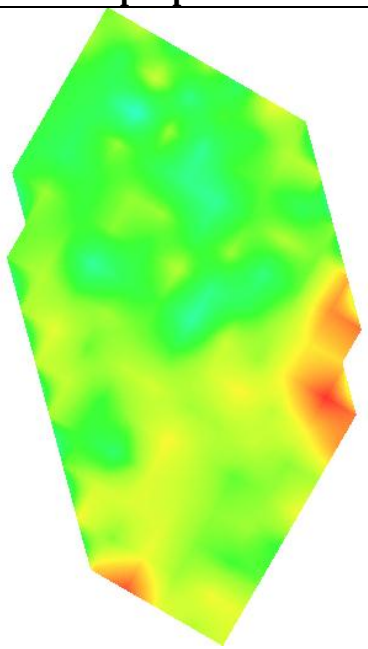
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.012
SAR 1g (W/Kg)	0.020

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at IEEE 802.11n band (Head)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Right Tilt – Device 1, no holster

A. Experimental conditions

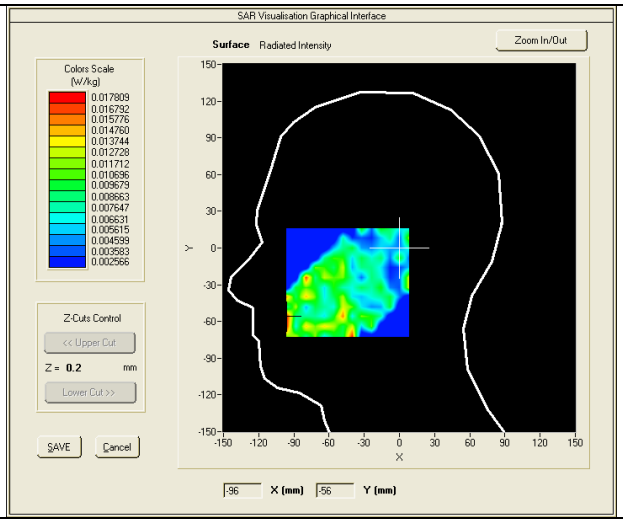
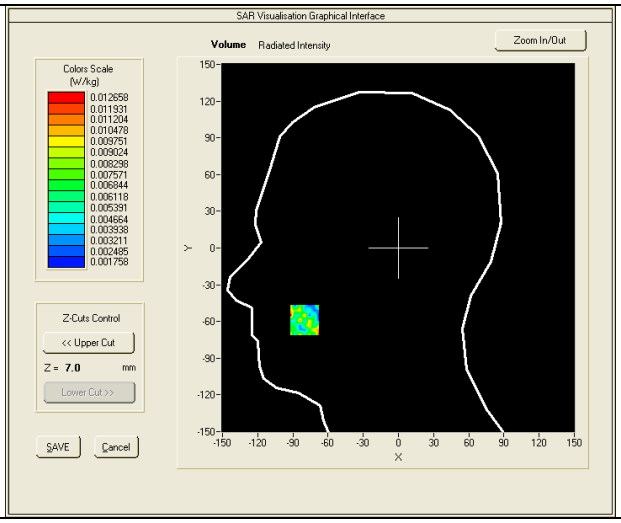
Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	SAM Phantom SN 13/09 SAM68
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 μV/(V/m)^2 ConvF: 4.19 DCP: 120, 122, 117 mV
Device Position	Right Tilt
Band	IEEE 802.11n
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel 100):

Frequency (MHz)	5500.00
Relative permittivity (real part)	36.98
Relative permittivity (imaginary part)	16.43
Conductivity (S/m)	5.02
Variation (%)	-0.91

C. SAR Surface And Volume

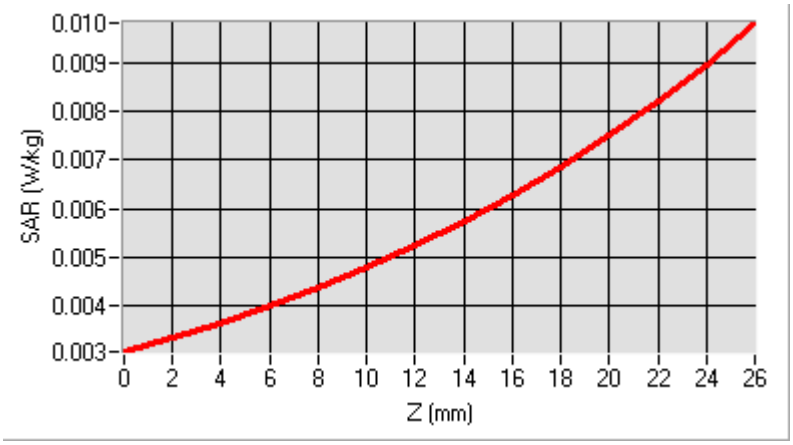
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-80.00, Y=-59.00
SAR Peak: 0.03 W/kg

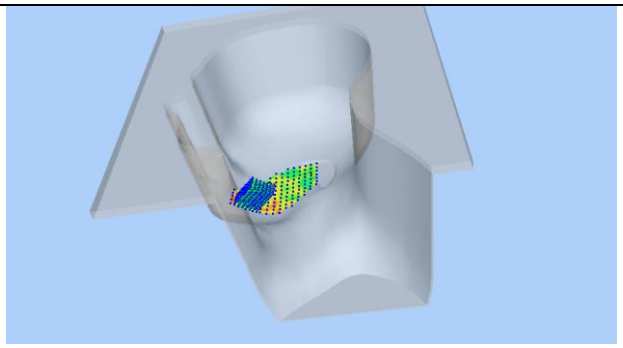
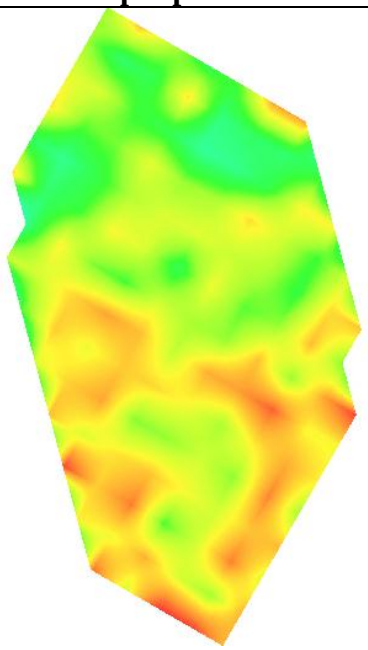
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.006
SAR 1g (W/Kg)	0.008

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at IEEE 802.11n band (Head)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Left Cheek – Device 1, no holster

A. Experimental conditions

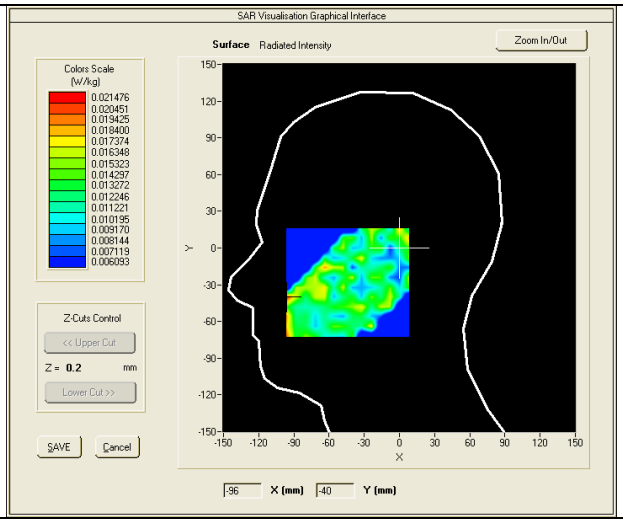
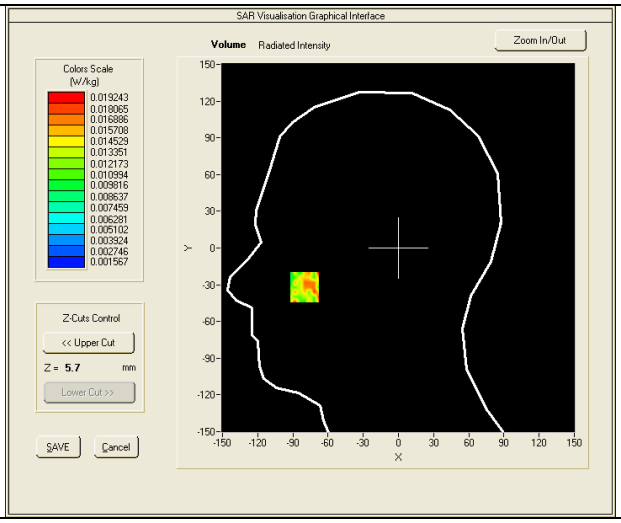
Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	SAM Phantom SN 13/09 SAM68
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 μV/(V/m)^2 ConvF: 4.19 DCP: 120, 122, 117 mV
Device Position	Left Cheek
Band	IEEE 802.11n
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel 100):

Frequency (MHz)	5500.00
Relative permittivity (real part)	36.98
Relative permittivity (imaginary part)	16.43
Conductivity (S/m)	5.02
Variation (%)	1.40

D. SAR Surface And Volume

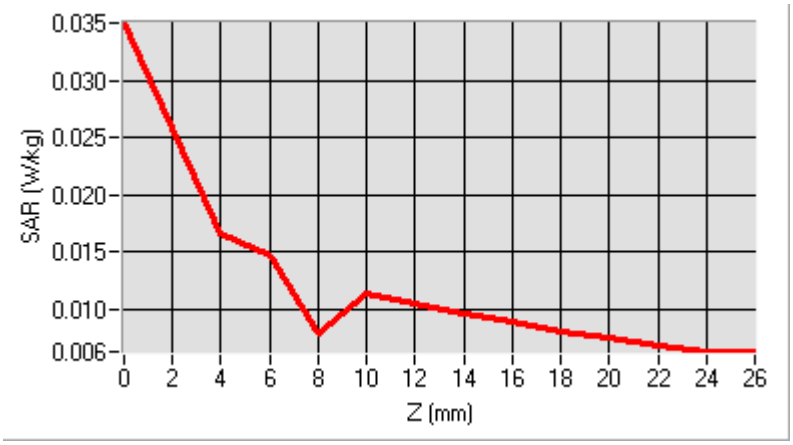
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-80.00, Y=-32.00
SAR Peak: 0.04 W/kg

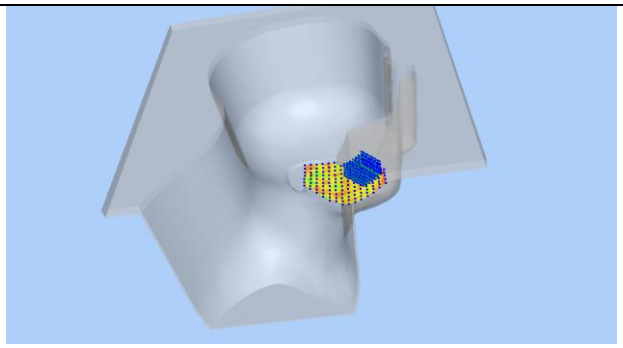
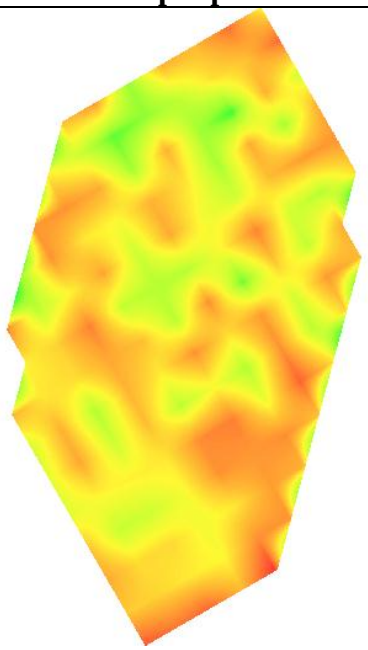
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.012
SAR 1g (W/Kg)	0.017

E. Z Axis Scan



F. 3D Image

3D screen shot	Hot spot position
	

SAR Measurement at IEEE 802.11n band (Head)

Type: Phone measurement
Date of measurement: 06/06/2014
Device position: Left Tilt – Device 1, no holster

B. Experimental conditions

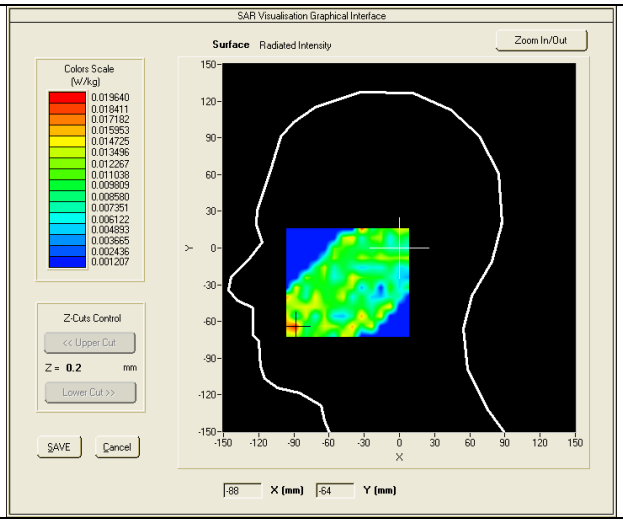
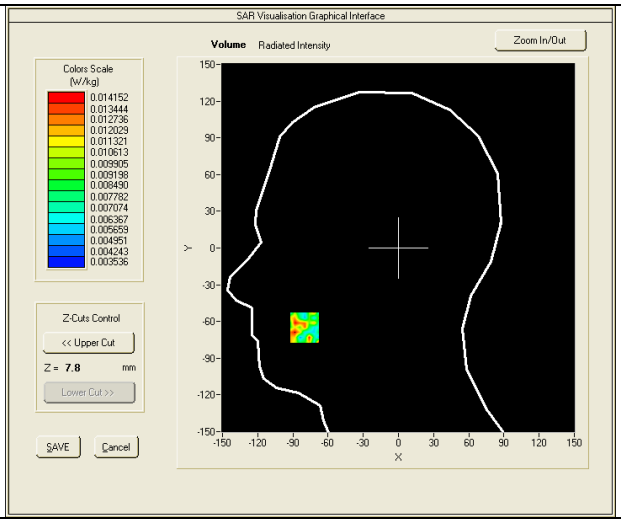
Area Scan	dx=8mm dy=8mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm,Complete
Phantom	SAM Phantom SN 13/09 SAM68
Probe	SSE2 SN 18/11 EPG122 Sensitivity: 0.89, 0.98, 0.92 μV/(V/m)^2 ConvF: 4.19 DCP: 120, 122, 117 mV
Device Position	Left Tilt
Band	IEEE 802.11n
Channels	Middle
Signal	OFDM (Crest factor: 1.0)

B. Liquid data & power drift

Middle Band SAR (Channel 100):

Frequency (MHz)	5500.00
Relative permittivity (real part)	36.98
Relative permittivity (imaginary part)	16.43
Conductivity (S/m)	5.02
Variation (%)	-1.40

E. SAR Surface And Volume

SURFACE SAR	VOLUME SAR
	

Maximum location: X=-80.00, Y=-65.00
SAR Peak: 0.03 W/kg

D. SAR 1g & 10g

SAR 10g (W/Kg)	0.009
SAR 1g (W/Kg)	0.011

E. Z Axis Scan

F. 3D Image

3D screen shot	Hot spot position