

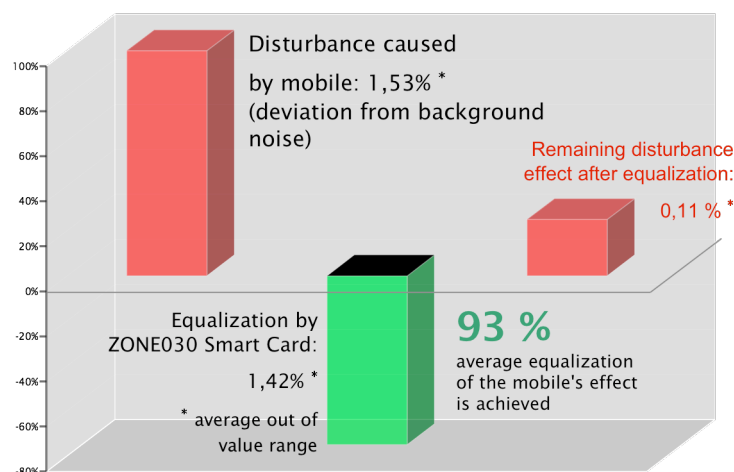
## Smart Phone Measurement Report No. 001/2012

### Samsung Galaxy S3

Operator: Eliran Moreno  
 Date: 2012-09-13  
 Time: 10:30 a.m.  
 Product tested: ZONE030 Smart Card

This document gives a brief account on a measurement of a non-thermal effect of a Smart Phone in the extremely low frequency (ELF) range of the magnetic field up to 15 Hz and the reduction of this effect by the product tested.

### Results

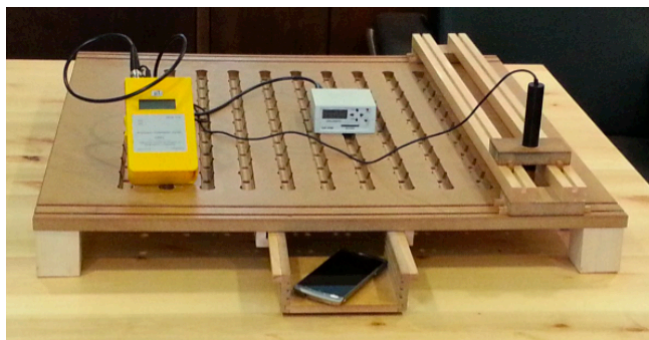


### Evaluation

A quantitative evaluation is possible for those of the 121 measuring points where both effects, the disturbance by the Smart Phone and its reduction by the Smart Card have a significant order of magnitude  $\geq 0.3 \mu\text{T}$  (Microtesla). The result of this assessment is that **the magnetic field disturbances by the Smart Phone are leveled out to a highly significant average extent of 93 %**

**by the Smart Card.**

**Changes (disturbances) are already biologically relevant at approx. 0.85% \*\*.**



### Measurement data

Meter: Precision Teslameter 05/40  
 Measuring range: 0 to 15 Hz  
 Amplitude: 0 to  $\pm 110 \mu\text{T}$   
 Resolution:  $0.1 \mu\text{T}$   
 Value range of deviations: -4.6 to 18.2% \*\*

\*\* relating to mean of measured values

### Assessment

**Disturbance by Smart Phone:** deviation of ELF magnetic field with Smart Phone from background noise

**Reduction by Smart Card:** deviation of ELF magnetic field with Smart Phone + Smart Card from the condition without Smart Card

