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## **ASSESSMENT ON ELECTRIC CHARGES POLLUTION IN THE RESIDENTIAL AREA AND LABORATORY ENVIRONMENT**

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### **Abstract**

The present paper proposes the assessment on electric charges that occurs in a certain period of time and in specified environments, and by default the electromagnetic field at different frequencies, those being extremely important for the electromagnetic pollution estimation according to the IEC 61000-4.2 (Electrostatic discharge immunity test) and IEC 61340 – 5.1 (Protection of electronic devices from electrostatic phenomena – General requirements) recommendations. The high interest in those determinations is related to the widespread use of electronic equipment and the rapidly development of information and communication technology, especially wireless communication. The electromagnetic pollution surveillance is carried out by estimating the electric and magnetic fields in the near field of electronic devices using advanced mathematical algorithms, illustrated by interactive graphical environment, that allows design, simulate and test the system developed in this study for air pollution evidence.

*Key words:* electronic device, electrostatic discharges, human charging, pollution, waveform

*Received: September, 2011; Revised final: February, 2012; Accepted: March, 2012*

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