



Electromagnetic and Radio Frequency Interference audit

An in-depth audit of computer rooms and data centres for compliance with the Regulations on EMF and RFI electromagnetic fields in the workplace and IT environment

- Compliance by on-site EMF audit
- Compliance by on-site RFI audit

Using the practical experience derived by Capitoline from auditing and designing computer rooms and data centres around the world we can offer an in-depth audit that covers all the major requirements for correct operation, best practice and improvement programmes.

Every two weeks, somewhere in the world, a data centre suffers a major breakdown and loss of availability with an average downtime of 17 hours. In nearly every case these breakdowns are avoidable with better design and procedures in place. Our audit experience covers large and small data centres both in the private and public sector in Europe, Africa and the Middle East.

By our status as CIBSE Low Carbon Consultants, chartered (professional) engineers from the Institute of Engineering Technology (IET) and the Chartered Institute of Building Services Engineers (CIBSE) we are able to certify installations to the requirements of International, European and American requirements for the safe levels of exposure of employees to electromagnetic fields and the reliable operation of information technology equipment.

The full audit consists of spectrum analysis of the electric field (V/m) and magnetic field (Gauss and Tesla) from 1 Hz to 20 MHz plus the RF field from 10 MHz to 6 GHz (dBm, V/m, A/m)

- Do you meet EU and US regulations on employee exposure to electromagnetic and radio frequency fields?
- Are you too close to power lines, radar, transformers or cellular telephone transmitters?
- Is your IT equipment likely to malfunction due to electromagnetic interference?
- Should you specify shielded data cable or optical fibre because of the RFI environment?
- Should your computer room/data centre be shielded?

Find problems from

- WLAN/WiFi
- UMTS
- Radar
- GSM
- Mobile/cellular telephones
- Bluetooth
- DECT phones
- Tetra
- Radio & TV station
- Mains 50/60 Hz interference



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DATA CENTRES AND IT INFRASTRUCTURE

International Regulations on the exposure of employees to electromagnetic fields

European Union: Non-ionising radiation - The Electro Magnetic Fields (EMF) Directive: 2008. In force April 2012

- Places a duty on the employer to conduct a risk assessment and calculate EMF strengths.
- Places a duty on the employer to eliminate or reduce as low as possible the risk of exposure; and where risk can't be eliminated that measures are devised by the employer to reduce the risk of exposure below ELV (Exposure Limit Value).

United States: Occupational Safety and Health Standards Standard Number: 1910.97 Title: Non-ionizing radiation

INTERNATIONAL COMMISSION ON NON-IONIZING RADIATION PROTECTION (ICNIRP) – 2009 "Guidelines for limiting exposure to time varying electric, magnetic and electromagnetic fields up to 300 GHz."

International Regulation on the safe and reliable operation of information technology equipment

European Union

- DIRECTIVE 1999/5/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity.
- EMC (Electromagnetic Compatibility) Directive 2004/108/EC

United States: FEDERAL COMMUNICATIONS COMMISSION SUBCHAPTER A-GENERAL, PART 15--RADIO FREQUENCY DEVICES

General EMC-EMF-RFI standards

EN 55022 , EN 55024 , EN 61000-3-2 , EN 61000-3-3 , EN 60950 , CISPR-22, CISPR-24

MICE requirements; Mechanical, Ingress, Climatic and Electromagnetic environment standards

The MICE concept was founded in Europe during the development of EN 50173-3 but is now completely harmonised at international level in IEC 24702:2006 and in North America within ANSI/TIA/EIA-1005 and ANSI/TIA 942.

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AMS-IX official auditor



Accredited Tier Designers (UpTime Institute)



DESIGN : AUDIT : TRAINING

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