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Practical aspects of EMF management

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As a basis for this discussion we have the new EU directive 2004/40EC. The member states shall bring into force the laws, regulations and administrative provisions necessary to comply with this directive no later than year 2008. In the directive, article 4, the commitment for the employer is pointed out: *the employer shall assess and, if necessary, measure and/or calculate the levels of electromagnetic fields to which workers are exposed.*

This includes terms as amplitude, frequency, duration, type of exposure, comparison to limit and action values, health and safety of workers with particular risk, interference with medical implants, etc, but also appropriate information to workers.

The measurements must be performed in compliance with a number of standards EN 12198-1:2000, EN 12198-2:2002, EN 12198-3:2002, prEN 50413 draft (Basic standard on measurement and calculation procedures for human exposure to electric, magnetic and electromagnetic fields (0 Hz – 300 GHz)) and other documents in preparation from working groups within CENELEC.

According to the demand in prEN 50413 draft the presentation of the measurement results should include no less than 14 points including characteristics of the relevant EM field sources (e.g. frequency, modulation, model, serial number), identification of each measuring instrument: brand name, model (and serial number), operating conditions of the relevant EM field source during measure (power), settings of the measurement equipment (e.g. measurement range, pass band, sampling frequency), and total measurement uncertainty.

It is rather obvious that to fulfil this obligation the employer needs to consult experts on EMF, not always for the assessment but for the measurements. The employer must have enough knowledge to know what measurements to be asked for. On the other hand the EM consultant must have knowledge about all the relevant standards, measurement procedure but also how to inform the employer and workers and what action should be taken due to the results of the measurements.

Is harmonisation of standards enough or do we also need harmonisation of education for those taking measurements? Is the national level enough or is it possible to extend the ambition to a European or international level? Is there a need for common certificate/licence?

These are practical questions that are most important to discuss, concerning implementation of the EU-directive.