

The role of standards in product safety: products and equipment emitting EMF

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für elektrotechnische Normung



CENELEC

The European Electrotechnical Standardisation Committee

- **30 members:** Austria, Belgium, Bulgaria, Cyprus, Switzerland, Czech Republic, Germany, Denmark, Spain, Estonia, Finland, France, Greece, Hungary, Ireland, Iceland, Italy, Latvia, Luxembourg, Lithuania, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovenia, Slovakia, Sweden, United Kingdom
- **9 affiliates:** Albania, Bosnia & Herzegovina, Croatia, FYR Macedonia, Israel, Serbia, Tunisia, Turkey, Ukraine
- Each member votes on CENELEC standards and can send delegates to meetings of working groups and technical committees



CENELEC, ICNIRP & the European Commission

- ICNIRP is the Commission's official advisor on exposure levels
- CENELEC is the official electrotechnical standardisation body of the EU, producing assessment and measurement standards
- Technical Committee 106X deals with “electromagnetic fields in the human environment”



Public exposures to electromagnetic fields

- Public health matters are the prerogative of Member States, not the Commission
- There can be no EU limit or binding standard on public exposures to electromagnetic fields
- There is a 1999 EU Recommendation on public exposures to electromagnetic fields
- The Recommendation is based on ICNIRP public exposure guidelines
- Many countries have adopted limits or standards based on the Recommendation



Product directives

- Electromagnetic compatibility (EMC) *is* the prerogative of the Commission
- 2 European Directives (Low Voltage Directive and Radio Telecommunications Terminals Equipment Directive) require that equipment made, sold or (in some cases used) in the EU is “safe”, with respect to electromagnetic fields.
- The Directives are legally binding and apply to all equipment, even when made outside the EU

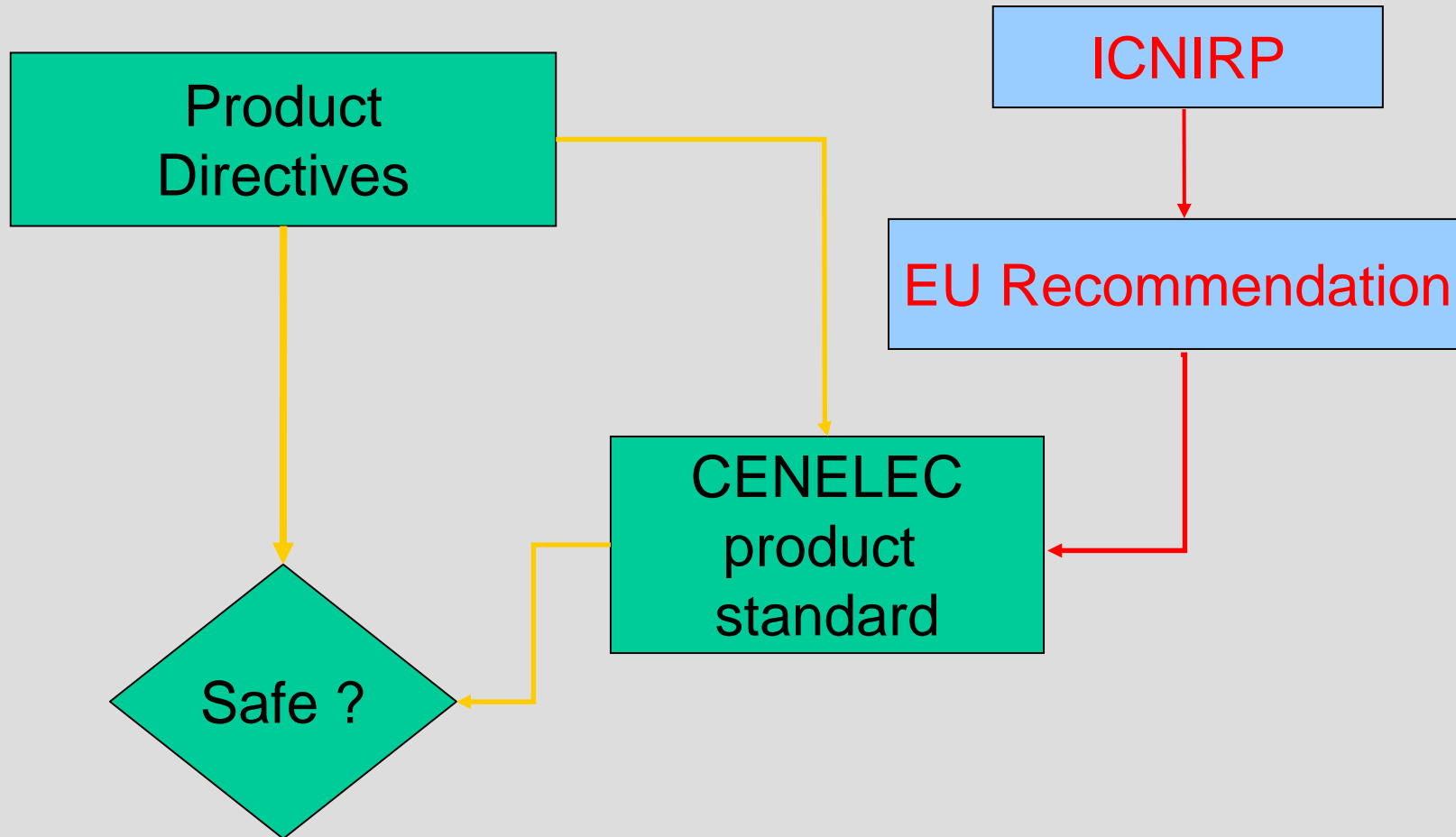


CENELEC product standards

- Product standards are published in the Official Journal of the European Community and listed under the Product Directives
- They are used to fulfil the safety requirements of those Directives
- They refer to the 1999 EU Recommendation, and hence to ICNIRP public exposure guidelines



Product standards: public



CENELEC TC106X product standards

Mobile phones: EN 50360, adopted in 2000 and EN62209-1, adopted in 2006



CENELEC TC106X product standards



Base stations

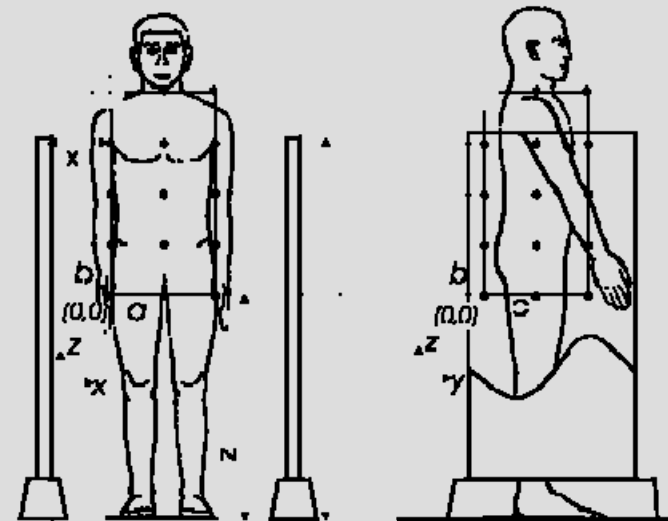
- Putting on the market: EN 50383 & EN 50384
- Putting into service: EN50400 & EN 50401
- *In situ* assessment: EN50492.



CENELEC TC106X product standards



Antitheft, RFID & access control: EN50364 and EN50357, adopted 2001



Other CENELEC product standards

- Industrial heating
- Railways
- Domestic appliances
- TV & radio broadcast
- Generic
- Low power
- Basic measurement standard



Occupational Exposures

- A Directive on occupational exposure to electromagnetic fields, Directive 2004/40/EC, was published in 2004.
- It is expected to be implemented by 2012
- It is based on ICNIRP occupational exposure guidelines
- It will require assessment of all *significant* sources of occupational exposure in the EU



Occupational exposure standards

- CENELEC standard EN50499 to be used to assess workplace exposures under this Directive
- This is a standard for the assessment of exposure of people and environments, not products
- EN50499 will call assessment procedures from other standards
- There is a requirement to consider “sensitive workers”: people with active implanted medical devices, people with particular sensitivity etc.

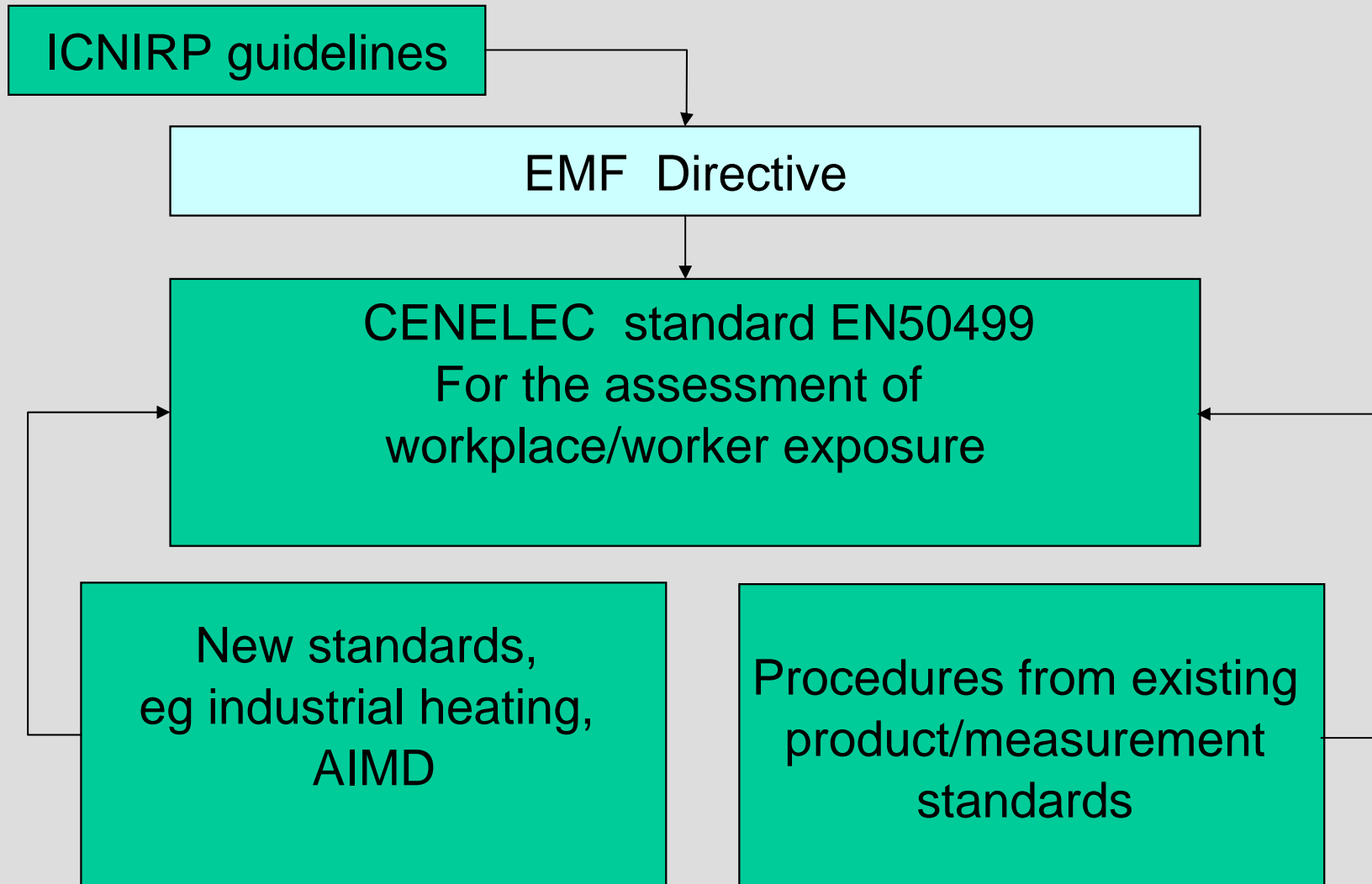


Occupational exposure standards

- The standardisation framework developed by CENELEC focusses on situations where exposures may be high
- Any situation where exposures are at general public levels is automatically-compliant
- This includes situations where all equipment has been certified for general public use



Standardisation and the EMF Directive



Summary

- There is a European Recommendation on public EMF exposure, and a Directive on occupational exposure
- Both are based on ICNIRP guidelines
- *Via* the product standardisation process, any product made or sold in the EU must meet EU/ICNIRP guidelines for public exposure
- New standards have been developed for the assessment of workplace/worker exposure



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