



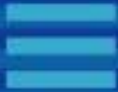
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DIRECTION GÉNÉRALE ENTREPRISES

*The Radio and Telecommunications
Terminal Equipment Directive
(1999/5/EC)
Addressing a globalising sector*

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- **Introduction**
- **The objectives of EU policy**
- **The R&TTE market in the EU**
- **The old equipment regulation regimes**
- **The R&TTE Directive**
 - **Philosophy**
 - **Provisions**
 - **Implementation**
- **To MRA or not to MRA?**
- **Conclusions**



- **The R&TTE sector is rapidly globalising**
 - **mobile communications: GSM, IMT-2000**
 - **Short range radio devices: IEEE 802.11, Bluetooth**
 - **Wired communication: xDSL, modem technologies**
- **Globalisation forces regulatory reform:**
 - **Wealth of technical regulation around the world hampers trade**
 - **Diverging administrative provisions**
 - **Diverging technical requirements**
 - **Diverging conformity assessment procedures**
 - **Regulators need to address non-tariff barriers**
 - **Rethink the proportionality of existing regimes**



- **The EU has a lot of experience to share**
 - **Single market forced the EU to resolve internal barriers**
 - **Started in 1986 to address R&TTE sector**
 - **1986: exchange of test reports (86/361/EEC)**
 - **1991: Mutual Recognition of approvals (91/263/EEC)**
 - **1999: Deregulation: R&TTE Directive (1999/5/EC)**
 - **Our conclusions:**
 - **The market players are the prime responsible: build your legal system on this**
 - **Rely on horizontal liability and consumer protection**
 - **Current a priori type approval regimes are an overkill to manage the risks caused by R&TTE products**
 - **MRAs 2nd best: deregulate first, cost/benefit not always clear**



The objectives of the R&TTE Directive

- **General objectives of EU R&TTE equipment/telecomm policy:**
 - protect safety of users from any dangers posed by R&TTE products
 - enable ubiquitous low-cost telecommunications services
 - remove barriers to trade to enable economies of scale
 - avoid disturbances to functioning of other equipment
 - ensure that the radio spectrum is effectively used
- **Different tools to achieve objective**
 - competition and liberalisation
 - horizontal consumer protection and liability regulations
 - voluntary standardisation: ETSI
 - harmonisation of frequency allocations
 - *harmonisation of equipment regulations*
 - *harmonisation of licensing conditions*
- **Objective of R&TTE Directive: harmonisation of equipment regulations and (partially) licensing conditions**



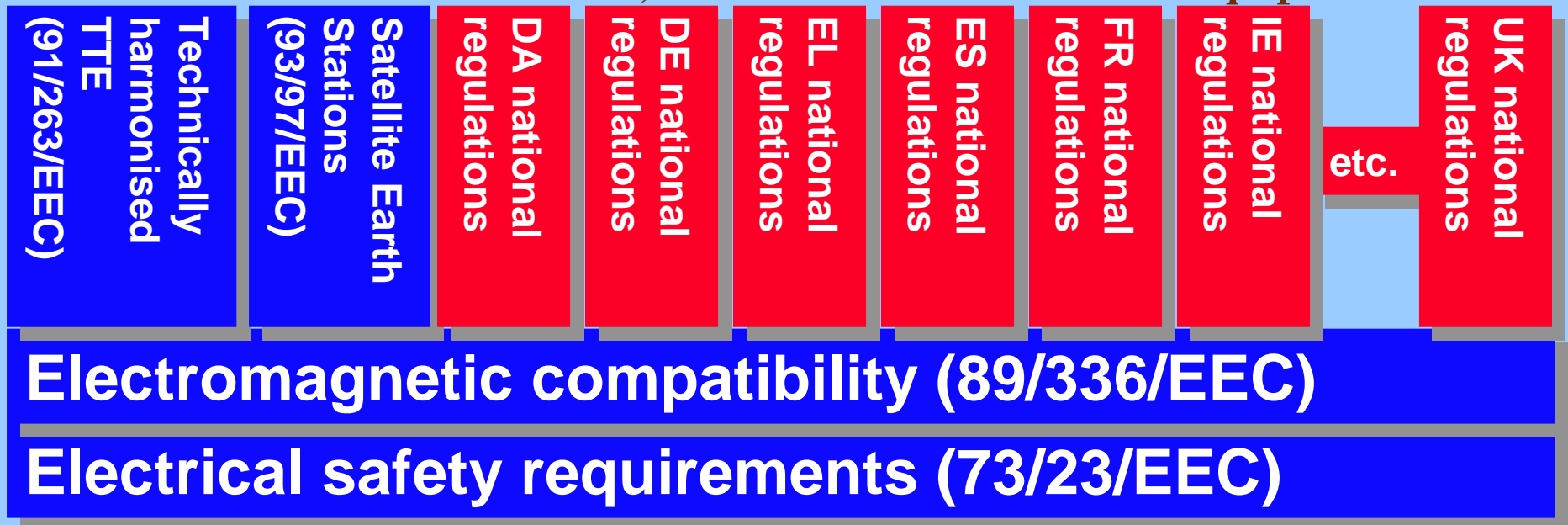
The R&TTE market in Europe

- **R&TTE equipment: 58 bEURO/year in the EU in 1998**
 - **Short Range Radio: car-door openers**
 - **Broadcast transmitters**
 - **Wire equipment: simple telephones but also cable modems etc.**
- **Highly fragmented**
 - **> 1000 national regulations, around 30 harmonised EU regulations**
 - **fragmentation of spectrum**
- **Market access situation dissatisfactory**
 - **Approval is a substantial cost factor (delays to market, administrative costs, testing costs)**
 - **market access rules are not transparent**
 - **No benefit from economies of scale: disadvantage for EU SMEs**
- **THEREFORE: need to act**



The old equipment regulation regimes (1)

- **Mix of national and EU approval regimes**
 - **EU: Common Technical Regulations rendering certain standards mandatory (only 30 out of >1000 ETSI standards)**
 - **Maintenance of national type approval regimes where no CTR (sometimes also based on ETSI standards) and for non-terminal radio equipment**





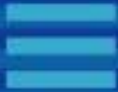
The old equipment regulation regimes (2)

- **No free movement unless a so-called Common Technical Regulation (CTR) adopted**
- **A priori market access controls (classical type approval)**
- **requirements: besides user safety and EMC extensive network protection, extensive requirements for certain product classes (e.g. maritime safety equipment)**
- **Experience:**
 - **Single market created for certain products: GSM, DECT, ERMES, ISDN**
 - **Slow in removing barriers and addressing new products: >2 years**
 - **Many product types not covered by EU regime (non-TTE radio), voluntary agreements in ERC with patchy implementation**
 - **Too much red tape in conformity assessment, procedures too heavy**



R&TTE Directive: Philosophy (1)

- **Scope: terminal equipment + all radio equipment (harmonised and non-harmonised frequency bands) with some minor exceptions**
- **No further national approval regulations**
 - **but remember: the Directive will NOT harmonise spectrum use!**
- **Community principles applied: free movement unless a MS has good reasons to bar products (notably radio)**
- **New approach Directive: Relies on voluntary standards**
 - **requirements are legal, not technical**
 - **technical translation of requirements delegated to the market through ETSI**
- **Safeguards for protecting spectrum**



R&TTE Directive: Philosophy (2)

- **No a priori market access controls on R&TTE products**
 - **market surveillance to deal with incompliant products**
 - **market self regulation**
 - **no accreditation of test houses required!**
- **Redefinition of role of equipment regulation in addressing the public interest**
 - **Less protection for networks**
 - **No mandatory standards, leave technical work to the market players**
 - **Obligation on operators to publish their interfaces**
 - **Liability for products and consumer protection laws deterrent**
 - **Relies on market surveillance**



● Which requirements does a product need to meet?

➤ Essential requirements of the Directive:

- Electrical Safety and health (as in Low Voltage Directive, 73/23/EEC),
- EMC (as in EMC Directive, 89/336/EEC)
- Spectrum use (effective use so as to avoid harmful interference),
- possibility to define some additional public interest requirements:
 - End-to-end interworking
 - No network harm
 - privacy protection
 - avoidance fraud
 - access emergency services:
 - *Decisions on maritime equipment, inland waterways and avalanche beacons*
 - Features for the disabled

➤ Needs to operate properly in nationally defined radio spectrum



• What changes?

R&TTE Directive (1999/5/EC)

National interface regulations (radio only)

BE	DA	DE	EL	ES
FR	IE	IT	LU	NL
A	PT	SF	SV	UK
N	IS	CH		
CZ	HU			

(LVD+EMC Directive conformity assessment procedures can continue to be used)



● How to meet radio requirements?

- Member States have to publish the rules for accessing the spectrum (Art.4.1). High level description of *intended* transmissions:
 - frequency band, transmission power, channel spacing etc.
- R&TTE Essential requirements to ensure that users of other bands are not disturbed (*non-intended* transmissions):
 - spurious emissions, out of band transmission etc.
- Harmonised standards will give presumption of conformity with the essential requirements
- Equipment also need to abide by the national frequency plan



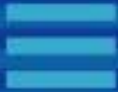
- **Radio harmonised standards as of 8/4/2000 (inherited from current regime):**

- TBR 6 (Ed.3) DECT Access
- TBR 23 TETS
- TBR 26 LMES in 1,5/1,6 GHz bands
- TBR 27 Land Mobile Earth Stations Ku-band
- TBR 28 VSAT Ku-band
- TBR 30 Satellite News Gathering Ku-band
- TBR 35 TETRA Emergency
- TBR 41 S-PCN 1.6/2.4 GHz
- TBR 42 S-PCN 1.9/2.1 GHz
- TBR 43 VSAT C-band
- TBR 44 low data rate LMES in 1.5/1.6 GHz band
- EN 301 419-1 GSM Phase II/DCS 1800 access (ex TBR19+ex TBR31)
- EN 301 419-2 GSM High Speed Circuit Switched Data
- EN 301 419-3 GSM ASCI
- EN 301 419-7 R-GSM

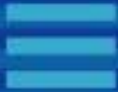


● **Radio harmonised standards from current regime which are not further relevant as of 8/4/2000:**

- TBR007 (Ed2) ERMES
- TBR010 (Ed2) DECT Telephony
- TBR011 DECT Public Access Profile
- TBR020 (Ed2) GSM Phase II Telephony
- TBR022 DECT generic access profile
- TBR032 (Ed2) DCS1800 Telephony
- TBR039 DECT/GSM interworking
- TBR040 DECT/ISDN interworking



- **How do I know how I meet requirements for wired equipment?**
 - **Level of regulation will be reduced:**
 - no physical harm to the network or disturbances
 - no further telecommunication specific requirements
 - **Operators have to publish the characteristics of their interfaces (Article 4.2), in their own interest to be complete, so that products don't cause problems**



● **Harmonised standards under current regime not further relevant as of 8/4/2000:**

- CTR001 X.21
- CTR002 (Ed2) X.25
- CTR003 (Am1) ISDN Basic Rate Access
- CTR004 (Am1) ISDN Primary Rate Access
- CTR008 ISDN Telephony
- CTR008 (Ed2) ISDN Telephony
- CTR012 (Am1) ONP 2048 kbit/s unstructured leased lines
- CTR013 ONP 2048 kbit/s structured leased lines
- CTR014 (Am1) ONP 64 kbit/s digital unstructured leased line
- CTR015 ONP two-wire analogue leased lines
- CTR017 ONP four-wire analogue leased lines
- CTR021 PSTN non-voice access
- CTR024 34 Mbit/s digital structured and unstructured leased lines
- CTR025 140 Mbit/s digital structured and unstructured leased lines
- CTR033 ISDN basic access packet mode
- CTR034 ISDN primary rate packet mode
- I-CTR037 PSTN Voice access
- CTR038 PSTN Voice




- **Does a product need to be tested?**
 - **Manufacturer takes full responsibility and should test to reinsure himself**
 - **Technical file to be kept at the disposal of surveillance authorities!**
 - **Annex II: Manufacturers declaration**
 - wired equipment and receive-only radio equipment
 - **Annex III: Annex II+prescribed essential radio tests**
 - transmitting equipment complying with harmonised standards
 - tests either from notified body or from harmonised standard
 - **Annex IV: Annex III+Notified Body opinion**
 - wired equipment and receive-only radio equipment (voluntary)
 - transmitting equipment complying with harmonised standards (voluntary)
 - transmitting equipment not complying with harmonised standards
 - **Full Quality Assurance**
 - **Possibility to use LVD and EMC procedures**

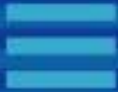


- **Does a product need to be approved by the authorities before being placed on the market?**
 - **Type approval will disappear and no administrative approval by the authorities is necessary anymore**
 - **Manufacturers need however to notify their intention to place on the market radio products, which don't operate in national spectrum (majority interpretation of article 6.4) 4 weeks before placing on the market**
 - **Certain countries will require all radio equipment operating in non-harmonised bands to be notified**
 - **MS may go and test product in 4 week period as part of market surveillance**



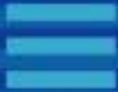
● How should a product be marked?

- **Article 4.1: Equivalence between interfaces and definition of equipment classes. Current application: 2 main classes subdivided in subclasses.**
 - **Class 1: equipment, which can freely move and be switched on in the Community (wired equipment, GSM, Receive-only equipment, etc.)**
 - **Class 2: equipment, for which this is not the case (transmitters, which are to be licensed)**
- **Marking: simple marking scheme agreed between Member States:**
 - **CE mark only for class 1 equipment**
 - **CE mark +  for class 2 equipment**



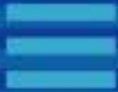
R&TTE Directive: Details (11)

- **This Directive is all about Transparency!**
 - **Article 4.1: Member States to be transparent on rules to get access to spectrum (obligation to notify interface regulations)**
 - **Article 4.2: Telecommunication Operators obliged to publish the interfaces of their interfaces**
 - **Article 6.3: Manufacturers to inform users of intended use and geographic limitations of use**
 - **Article 6.4: Manufacturers to inform spectrum authorities about intention to place equipment on the market operating in non-harmonised bands.**



R&TTE Directive: Details (12)

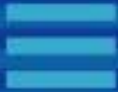
- **Spectrum doesn't risk to be polluted:**
 - **Directive handles problems caused by non-harmonisation of spectrum through safeguards:**
 - **market forces: it doesn't make sense to sell equipment, where it cannot be used. Actively marketing equipment, which cannot be used is an offence (misleading users, promotion of illegal use);**
 - **Obligation for manufacturer to indicate on the packaging and in the manual, where the equipment is intended to be used (Art. 6.3);**
 - **Information on equipment, marketed in a Member State, but not for use there to spectrum authorities (Art. 6.4)**
 - **Conformity assessment procedures (Art.10)**
 - **Control of usage through license to use equipment (Art. 7.2)**
 - **Transparency on access to spectrum (Art. 4.1)**
 - **Ultimately: possibility to bar products from the market (Art. 9.5)**



R&TTE Directive: Implementation (1)

- **Member States to implement by 7/4/2000**
 - **Delays for various reasons, mainly procedural**
 - **Member States apply regardless of implementation**

- **Non-implementation of R&TTE Directive will however lead to problems:**
 - **Implementation prerequisite for proper functioning**
 - **Big Bang: no type approvals under existing regime after 8/4/2000**
 - **No legal basis for:**
 - **notifying publication of regulated radio interfaces**
 - **notifying conformity assessment bodies**



R&TTE Directive: Implementation (2)

- **Directive needs to land:**
 - a good set of standards supporting it will take time
 - conversion of old approval regulations into interface regulations takes time
 - Culture change takes time
- **What to do in case of non-implementation**
 - Manufacturer can use the Directive
 - Declare compliance to old approval specification
 - Use tests of old approval specification for spectrum tests
- **Situation looks however good: market players and regulators are working since 1,5 years**



- **TCAM, the Committee met 6 times**
 - **TCAM 1 (April 99): Adopted Rules of Procedures and many issues raised**
 - **TCAM 2 (July 99): In depth discussions and agreement on guidelines for the publication of network interface**
 - **TCAM 3 (October 99): Resolution of a large number of interpretation issues**
 - **TCAM 4 (December 99): Standardisation issues + formal decision on equipment classification and marking**
 - **TCAM 5 (March 2000): remaining decisions required for implementation: inland waterway, maritime**
 - **TCAM 6 (September 2000): decision on avalanche beacons**



- **Consultative structure**

TCAM (formal committee)
General Policy Issues and advice to the Commission



Equipment classification subgroup

ADMINISTRATIVE COOPERATION
Market surveillance

**ERC TG2, WG RR
ERC FM SRD MG**

CENELEC / ETSI

**R&TTE Compliance
association**



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The R&TTE Directive: To MRA or not to MRA?

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- **Conformity assessment is substantially deregulated in the EU**
- **Rules apply equally to EU and non-EU manufacturers and testing industry**
- **No accreditation required of non-EU test houses as responsibility for conformity assessment fully with the manufacturer**
- **Therefore Polish certification industry can freely provide their services NOW**
- **R&TTE expanding into CEECs: CZ, HU, Slovenia, Slovakia, EE are implementing**
- **Interested to learn how Poland intends to progress in this area**



- **Directive will have a fundamental impact:**
 - **Manufacturers: less red tape but more obligations to communicate information to users and spectrum authorities. Have to act in a responsible fashion (self-regulation requires discipline)**
 - **Test houses: less legal work, to concentrate on voluntary (i.e. notably interoperability) testing and advising industry**
 - **Notified Bodies (currently issuing type approval): Very little involvement left (some for radio)**
 - **Public authorities: to be much more transparent on the rules to access spectrum, less an industrial policy tool**
 - **Surveillance authorities: increased role, key to success of the Directive**
 - **Operators: Less protection from regulation, they need to publish interfaces**
 - **ETSI: no obligatory standards for regulatory use but thinner voluntary standards, main work remains outside regulatory domain**



- **The R&TTE Directive is a major deregulatory step;**
- **Europe will have a lighter regime than its main trading partners;**
- **Let's discuss how we can further address market access problems and please reflect on your own legal regime**
- **It will not harmonise spectrum but will put pressure on spectrum harmonisation;**
- **It requires however a restructuring of the regulatory bodies. We are setting an efficient surveillance infrastructure;**
- **Public authorities will leave more to the market: markets should not fail to take their responsibility;**



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Information on the web

**<http://europa.eu.int/comm/enterprise/rtte/>
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**For questions and suggestions: mark.bogers@cec.eu.int or
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