

# Regulation & Standardisation

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# REGULATION



- LEGAL FRAMEWORK TO FOSTER TELECOMMUNICATIONS AND TO OPTIMISE THE USE OF SCARCE RESOURCES
- EMC
  - PRODUCTS
  - NETWORKS

# Regulation product EMC



- CE MARK IN EUROPE
- REFERENCES
  - DIRECTIVE EMC (89/336)
  - DIRECTIVE R&TTE (1999/5)
  - CISPR 22:94 :97
  - EN55022:95 :98
- BODIES
  - CISPR SC I WG 3
    - CISPR/I/26/DC
    - CISPR/I/44/CD

- REFERENCES

- DIRECTIVE EMC (89/336)
- DIRECTIVE R&TTE (1999/5)
- FCC Part 15

- BODIES

- FCC, MPHPT, ARIB, CENELEC TC210, (CENELEC SC205A), ETSI ERM, (ETSI PLT), CENELEC/ETSI JWG EMC

- BASIC CONSIDERATIONS:

- **BROADBAND COMMUNICATIONS** SYSTEMS ARE AN IMPORTANT ENABLER FOR THE **INFORMATION SOCIETY**
- **COMPETITION** IN THE LOCAL-LOOP IS REQUIRED
  - Unbundling is not succeeding. ILEC holds 9x% of the broadband access market
- PLC REPRESENTS THE BEST ALTERNATIVE FOR REAL COMPETITION IN THE LOCAL-LOOP

- BASIC CONSIDERATIONS:
  - BROADBAND COMMUNICATIONS SYSTEMS SHOULD BE ALLOWED TO PERFORM AT THE **MAXIMUM CAPACITY** POSSIBLE **WITHOUT DISTURBING** RADIO SERVICES DUE TO UNINTENTIONAL RADIATIONS
  - **FIELD EXPERIENCE** IS THE BEST WAY TO PROPERLY SET LIMITS FOR UNINTENTIONAL RADIATIONS: FIELD TRIALS, FROM CHILE TO HONG KONG DEMONSTRATE NO INTERFERENCE PROBLEMS

- BASIC CONSIDERATIONS:
  - ALL BROADBAND COMMUNICATIONS SYSTEMS SHOULD HAVE TO COMPLY WITH THE SAME LIMITS (**NO DISCRIMINATION**)
  - THE LIMITS SHOULD ALLOW THE CURRENTLY DEPLOYED SYSTEMS (ETHERNET, TVs, HALOGEN LAMPS, INDUCTIVE OVENS, ETC.) TO PERFORM WITHOUT CHANGES

- BASIC CONSIDERATIONS:
  - LIMIT SHOULD BE **FLAT** WITH FREQUENCY
  - REMEDIATION TECHNIQUES (**NOTCHES**) ARE USEFUL BUT SHOULD **ONLY** BE USED **WHEN AND WHERE NEEDED** (millions of users should not suffer worse service because of a few complaints cases)

- BASIC CONSIDERATIONS:
  - **LIMITS** SHOULD BE AS HARMONISED AS POSSIBLE **WORLD-WIDE**
    - The performance is directly proportional to the limit. Why should some citizens have different level of performance than others?
    - Why should one country have different limits to another one?

## STANDARDISATION



- TWO BIG GROUPS:
  - THOSE USED TO REGULATE
  - THOSE USED BY INDUSTRY TO ENHANCE MARKET SUCCESS

## CLC/ETSI JWG EMC



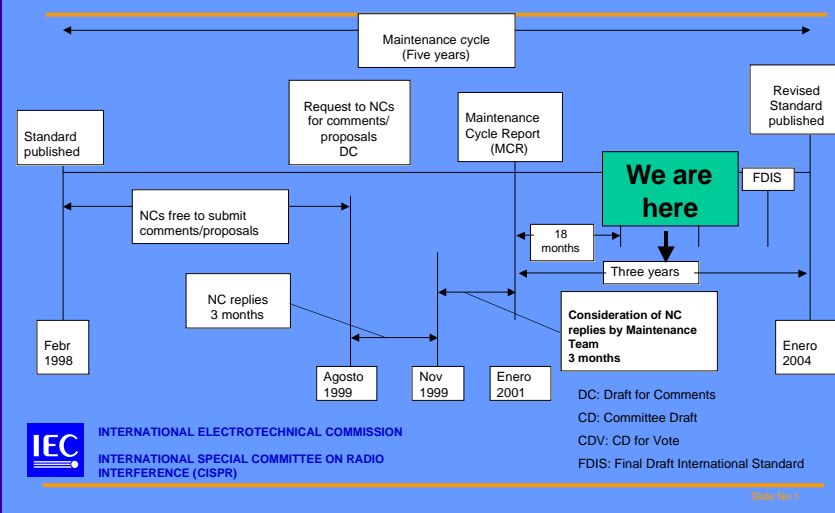
- CENELEC/ETSI Joint Working Group on EMC of Conducted Transmission Networks
- Chairman
  - Ronald Storrs
  - Swedish regulator
- Will do the work of the Mandate 313 (technical harmonised standards for radiated limits for networks in Europe)

## IEC CISPR SC I WG 3

- IEC: International Electrotechnical Commission
- CISPR: International Special Committee on Radio Interference
- Sub-committee I: EMC of Information Technology Equipment, Multimedia Equipment and Receivers
  - Chairman: M. Wright (British Telecom)
- WG 3: Information and Telecom. Equipment
- Amending CISPR 22 to take into account PLC

## IEC CISPR SC I WG 3

### CISPR Standards - Maintenance



- FCC Part 15
  - Stable and experienced situation: 30  $\mu\text{V}/\text{m}$  at 30m and 40 dB/decade of correction factor for different distances
  - Only regulation worldwide that sets limits for unintentional radiation from wired broadband communication systems
  - Very experienced. Have been in force for a number of years, enough to properly assess their successful applicability
  - Currently govern a big percentage of the wired broadband communication systems (being in force at least in USA and Canada)
- NOI 03-100A1

- DG ENTERPRISES:
  - Encharged of the regulatory environment, notifications and infringements
  - Responsible for the Mandate 313
- DG INFORMATION SOCIETY
  - Implement the EU Policy on “Information Society for all”
- DG COMPETITION
  - Coherent competition policy for the European Union



- Chairman
  - Sergio Rogai (ENEL)
- Technical and Regulatory Working Group Chairman:
  - Víctor Domínguez Richards
  - Establish common strategies and action plans for the PLC community

- Chairman:
  - Victor Dominguez Richards
- Work Plan
  - 3 Published Standards:
    - TS 101867: Coexistence of Access and In-House Powerline Systems
    - TS 101896: Reference Network Architecture Model
    - TR 102049: QoS for inhome

- Work Plan (contd.)
  - PLT Coexistence of Access and In-house Powerline Systems
    - Deliverable EN (European Norm)
  - PLT In-house/In-house Coexistence
    - Deliverable TS (Technical Standard)
  - PLT Detailed In-house Architecture and Protocols
    - Deliverable TS

- Work Plan (contd.)
  - **PLT Programmable PSD mask**
    - Deliverable TS
  - PLT Definition of a dynamical frequency allocation for Access/In-House coexistence
    - Deliverable TS

## TRIALS & ROLL-OUTS

- ONLY IN EUROPE MORE THAN 300,000 HOUSEHOLDS HAVE PASSED AND MORE THAN 16000 USERS ENJOY FROM BROADBAND ACCESS PLC SERVICE
- NO CASES OF INTERFERENCE HAVE BEEN FILED

## CONCLUSIONS

- PLC PRODUCTS COMPLY WITH THE RELATIVE PRODUCT STANDARDS FOR REGULATION
- CISPR 22 IS BEING AMENDED TO TAKE INTO ACCOUNT PLC
- JOINT INTERNATIONAL EFFORTS ARE REQUIRED TO KEEP THE PACE IN CISPR

## CONCLUSIONS



- A FLAT LIMIT IS REQUIRED, COMPATIBLE WITH ETHERNET... AND APPLICABLE TO ALL NETWORKS
- THOUSANDS OF HOUSHOLDS AND USERS ARE ENJOYING FROM BROADBAND PLC SERVICE
- NO INTERFERENCE CASES
- LIMIT SHOULD BE EXTRACTED FROM EXPERIENCE



Thank you for your attention!



Any questions?