

# **Workshop on Market Mechanisms for Spectrum Management - Speaker**

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# Italian way in spectrum management and planning

The bodies involved in Italy in the spectrum management and planning are:

- Ministry of communication entitled for spectrum allocation and for private and public services frequency assignment for civil utilisation and for the elaboration of the assignment plans apart of broadcasting services
- Ministry of defence entitled of the management of frequencies for military and public safety applications
- Authority of telecommunications entitled of frequency planning for broadcasting services

# Italian way in spectrum management and planning

- The main tool for manage the frequencies allocation is the Piano Nazionale di Ripartizione delle Frequenze (PNRF)
- The PNRF is a Ministerial Decree that is fully updated every three years and in particular after the conclusion of a WRC
- The procedure of a partial or complete updating of the PNRF is performed through a previous consultation with all the parties interested in the frequency utilisation

# Main issues related to the spectrum management in Italy

- Participation to the international fora
- Coordination with neighbouring countries
- Market surveillance to grant that the apparatus are fit to meet the scope of using the spectrum in an efficient way
- Spectrum monitoring to grant that every operator, entitled of a frequency right of use, will use the resource under the conditions stated by authorisations

# Main issues related to the spectrum management in Italy

The Ministry of communications performs both market surveillance and spectrum monitoring through a network of local offices, equipped with mobile and fixed measurement laboratories. The monitoring stations are located at every Italian *regione* and are also present at *provinciale* level.

# Reason of growing interest for wireless communications

The utilisation of the radio spectrum as became, in the very last decades, more and more important, due to:

- the current development of the electronic communications prevalently toward the wireless links in alternative to the wired ones
- the complexity and the cost of the deployment of the wired local loop that make ever more fit the wireless lines

*The result of the ever growing request of spectrum is a great pressure on spectrum managers to have new bands available for new services and to introduce new technologies more efficient in spectrum utilisation.*

# It needs a new way for spectrum management?

- there is pressure for more flexibility both in the assignment of new resource and in the market of frequencies
- at European level, both in CEPT and in European Commission, is now in discussion a new approach to the frequency management

# Request for flexibility in frequency allocation: main issues

- search for frequency bands that can be not subject to any kind of *a priori* allocation, free to be used without any kind of harmonization
- technological neutrality: no advantages must be given to a particular technology in frequency allocation

# An obvious (?) consideration

- *spectrum is a scarce and easily polluted resource*

What this means?

- *the need for a cautious use of frequencies, based in an international set of rules aiming to prevent incorrect use of the resources*
- *the harmonisation is a practice useful for both the final users and the manufacturers*

# What the real problem is?

- what is the extend of regulation to be settled in order to avoid unnecessary constrains on the development of new applications
- the amount of harmonization really necessary to grant the users and the manufactures and contemporary to avoid the exclusion from the market of new and more efficient technologies

# A look from the point of view of the user

- independently of its technical skillness, the user needs to access in the simplest way the information networks, without the need to retune or change its terminal while travelling from a national network to another: in few words interoperability at the higher level possible

# A look from the point of view of manufacturers and operators

- to have a market as huge as possible, and this can be obtained only with an economy of scale able to widen the market for a terminal or an application

# Harmonization or liberalisation?

- harmonization of the frequency at most wide level attainable but not exceeding the minimum need to grant interoperability and economy of scale
- liberalisation at level necessary to let the way open to the introduction, without excessive and not necessary restrictions, to new innovative technologies

# How the balance can be performed?

- to seek for application whose utilization is not subject to any kind of authorisation ex ante: existing SRD applications, planned UWB applications
- to reach a certain amount of flexibility also for other applications, but granting the degree of commonality necessary to maintain the minimum of interoperability between different applications recognised as member of a specific family of service, and to assure to the manufacturers that he can face not a number of different markets with different standards and frequencies , but an unique great market which benefit of the economy of scale

# A look to a hypothetical, more or less distant, future

- when it will be possible to tune the terminal by software, in a large bandwidth, and harmonize only a common channel to download from the network the information about the service offered, the frequencies used and the characteristic of the service, then it will be possible to stop with harmonization of the frequencies and of the standard preserving the possibility of the interoperability and of the mass production of terminals with the advantages of economy of scale