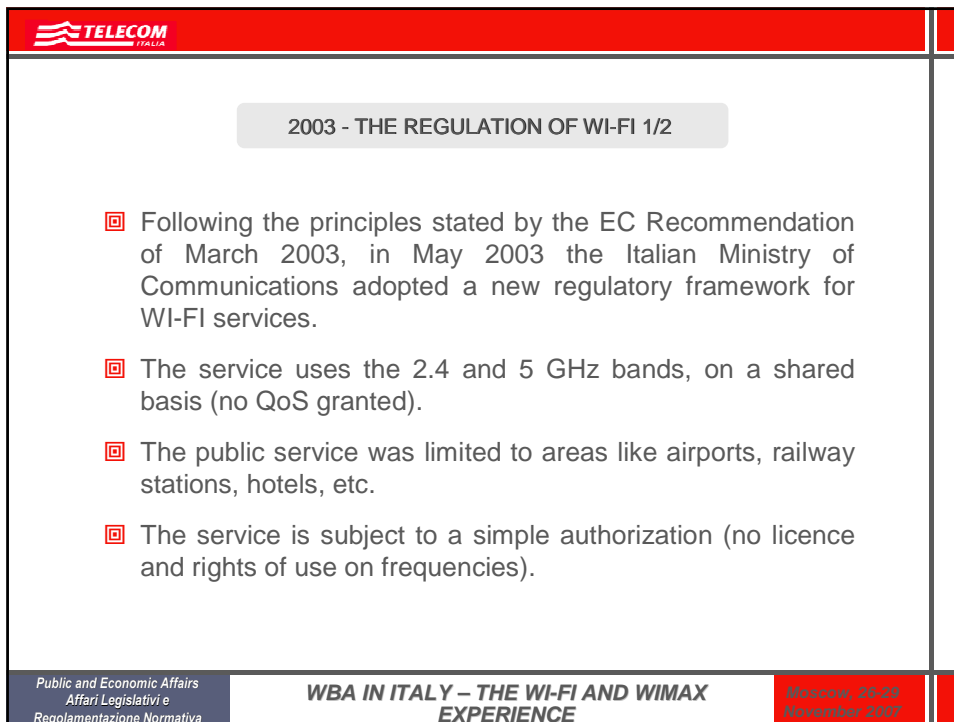





WBA IN ITALY – THE WI-FI AND WIMAX EXPERIENCE

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2003 - THE REGULATION OF WI-FI 1/2


- ▣ Following the principles stated by the EC Recommendation of March 2003, in May 2003 the Italian Ministry of Communications adopted a new regulatory framework for WI-FI services.
- ▣ The service uses the 2.4 and 5 GHz bands, on a shared basis (no QoS granted).
- ▣ The public service was limited to areas like airports, railway stations, hotels, etc.
- ▣ The service is subject to a simple authorization (no licence and rights of use on frequencies).

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2003 - THE REGULATION OF WI-FI 2/2		
<ul style="list-style-type: none">▣ Authorized operators grant that their service does not interfere with other existing services.▣ Network integrity and security and interoperability of services must be insured.▣ Interconnection between Radio LANs is allowed through public telecommunications networks.▣ 5.150-5.350 GHz band is reserved for indoor usage.▣ Power limits: 100 mW for 2.4 GHz and 1 W for 5.4 GHz.		
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2005 – NEW REGULATORY MEASURES		
<ul style="list-style-type: none">▣ In October 2005 the Italian Ministry of Communications introduced some amendments to the WI-FI regulation.▣ Limitations to the installation in specific areas were removed.▣ No limitations to interconnection between Radio LANs, but explicit reference to the obligation of granting law enforcement and security.▣ There is a general obligation for the owners of public areas to allow the installation of RLANs without technical or commercial discriminations.		
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WIMAX		
<ul style="list-style-type: none">▣ WiMAX = Worldwide Interoperability for Microwave Access.▣ “Standards based technology enabling the delivery of last mile wireless BB access providing fixed, nomadic, portable and, eventually, mobile wireless BB connectivity” (WiMAX Forum).▣ In early 2005 in Italy a public consultation testified a high interest on the possibility of introducing WiMax services.▣ This interest led to the launch of a technical trial, jointly managed by manufacturers and operators, which started in July 2005.		
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WIMAX TRIAL		
<ul style="list-style-type: none">▣ Allocation of frequencies: the 3.4-3.6 GHz band, used for the trial, is assigned to the Ministry of Defence, which temporarily allowed its use.▣ The trial was conducted in urban and rural areas to test WiMAX effectiveness in different geographic conditions.▣ It seems that there is not a big interest for the possible use of the 5.8 GHz band.▣ Mobile Operators are quite “warm” towards WiMAX, because they consider it as a risk for the development of UMTS services.		
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WIMAX TRIAL

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THE 2006 PUBLIC CONSULTATION ON WIMAX


- ▣ In November 2006 the Italian regulatory Authority launched a public consultation on the introduction of BWA technologies in the 3.5 GHz band.
- ▣ 70 interested parties submitted their contributions.
- ▣ Different opinions were expressed on the methodology for assigning the rights of use, on the geographical planning, on the opportunity of a technology neutral approach.
- ▣ Other important issues were interoperability and roaming and regulatory obligations.


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THE DEFINITION OF THE PROCEDURE FOR THE ALLOCATION OF WIMAX FREQUENCIES 1/3		
<ul style="list-style-type: none">▣ In June 2007 the Italian regulatory Authority published a Decision establishing the procedures for the allocation of the 3.5 GHz band.▣ The decision followed an agreement between the Ministries of communications and defense on a time schedule for the availability of the band for non military use.▣ For each geographical macro region (from 2 to 4 regions) three rights of use will be available.▣ One right is reserved to subjects which have not been granted UMTS frequencies.		
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THE DEFINITION OF THE PROCEDURE FOR THE ALLOCATION OF WIMAX FREQUENCIES 2/3		
<ul style="list-style-type: none">▣ The macro regions will be defined on the basis of population, investments sustainability and frequency limitations related to the period of transition from military to civil use.▣ The frequencies will be assigned through a bidding procedure; further bidding is envisaged for non assigned frequencies.▣ The minimum offer will be determined with reference to the available spectrum, the population and the gross product of the relevant area, the limitations for military use.▣ The winners will be allowed to use the assigned spectrum in both FDD and TDD.		
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THE DEFINITION OF THE PROCEDURE FOR THE ALLOCATION OF WIMAX FREQUENCIES 3/3		
<ul style="list-style-type: none">☐ The winners will have a coverage obligation based on a minimum score which must be reached within 30 months and is related to the population and the availability of 3G mobile services..☐ The minimum score can be reached also through commercial agreements with third parties.☐ In case of non-fulfilment of the obligations, the rights of use can be revoked.☐ The winners must respect the authorization procedure for electronic communication services as established in the national legislation.		
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WIMAX REGULATION AND MARKET DEVELOPMENT 1/2		
<ul style="list-style-type: none">☐ The minimum price which will be established for the right of use will be a decisive factor, but a low price risks to become discriminatory and unfair for the licensed UMTS Operators.☐ There should be no major influence from the use of the unlicensed 5.8 GHz band as this band is subject to attenuation and losses, with a low QoS.☐ Past experiences should be carefully considered before building up unrealistic market scenarios: for example, WLL has had a very limited impact on market structure.		
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WIMAX REGULATION AND MARKET DEVELOPMENT 2/2		
<ul style="list-style-type: none">☐ "Time to the market" seems to be a crucial element and the situation is not encouraging.☐ Major competitors to WiMAX solutions are steadily growing: xDSL services and UMTS are very successful and prices and costs are decreasing.☐ The potential of WiMAX can be effectively exploited for reducing the digital divide, in particular in rural low density areas, and as a targeted solution for specific customers.☐ WiMAX should not be considered so much as a tool for increasing competition but as one of the elements contributing to the development of an integrated and converging network.		
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