

Public Wi-Fi in India - A Regulatory Perspective

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Regulatory Issues in Public Wi-Fi

1. Licensing/ Registration
2. Tariff and Interconnect Regulation
3. Quality of Service Regulation
4. Universal Service Regulation
5. Spectrum Regulation
6. Bundling

1. Licensing/ Registration

- * **Whether to license/ Register Public Wi-Fi providers?**
- * **Reason: Wi-Fi providers may be resellers of Internet Service provided by the ISPs**
 - * **Level playing field between Wi-Fi providers, ISPs and Telcos**
 - * **Much like the debate between Telcos and OTTs**
- * **Advantages of Licensing/ Registration**
 - * **Improves accountability**
 - * **incorporate due diligence and protect user interests to some extent**
- * **Disadvantages**
- * **Regulatory overhead both on Regulator and Providers**
- * **Recommendation**
 - * **Reselling Internet Service should be allowed**
 - * **Simple registration of the Wi-Fi providers**
 - * **Wholesalers can do on behalf of retailers**

2 & 3. Tariff and Interconnection Regulation

- * Internet Service Tariffs under market forbearance
 - * **Recommendation: Keep it as is**
- * Interconnect Usage Charges
 - * **Between Wi-Fi providers and ISPs**
 - * **If present, ISPs who provide their own Wi-Fi have advantage**
 - * **If not, ISPs might be unwilling to connect Public Wi-Fi networks**
 - * **Landline – Landline: No interconnection charges**
 - * **Landline – Mobile: Mobile Termination Floor Charges**
- * Interoperability guidelines
 - * **Seamless roaming standard**
- * Recommendation
 - * **Should be left out of Regulation: Do not say “No” or “Yes”**
 - * **Leave it to ISPs and Wi-Fi providers to contract**
 - * **Will incentivize ISPs to connect Public Wi-Fi networks**
 - * **Market determined interconnect charges subject to ceiling**
 - * **However, *equal access rights* should be imposed on ISPs and registered Wi-Fi providers**
 - * **Technical interoperability and roaming standard is required**

4. QoS Regulation

- * Should QoS norms be applicable to Wi-Fi providers?
- * Telcos are subject to QoS regulation for voice services
- * We do not yet have QoS metrics for assessment of broadband quality
 - * **Except for downlink speed**
- * Possible QoS metrics for Wi-Fi providers
 - * **Coverage, uplink and downlink speed, roaming, billing**
- * Recommendation
 - * **Need to develop a comprehensive set of QoS metrics for public Wi-Fi**
 - * **Registered Wi-Fi providers shall adhere to QoS guidelines**
 - * **Auditing: ISPs can report on Wi-Fi network performance**

5. Universal Service Regulation

- * **USO fund guidelines do not cover Public Wi-Fi provisioning**
- * **Need USO fund support for massifying Public Wi-Fi especially in semi-urban and rural areas**
 - * **As part of NOFN project for Wi-Fi access services**
- * **Recommendation**
 - * **Wi-Fi providers shall be waived off from USL (5% of AGR)**
 - * **Need accounting separation by ISPs of Wi-Fi usage and associated revenue**
 - * **Create specific schemes under USO Fund for public Wi-Fi access in rural areas**
 - * **Similar to OFC coverage and Renewable energy schemes**

6. Spectrum Regulation

- * Release of more spectrum for unlicensed use
 - * in 5150-5350 MHz, 5470-5725 MHz and 5725-5825 MHz
 - * Release of V-band (57-64 GHz) for outdoor use
 - * permission to use 2.16 GHz in line with IEEE 802.11 ad

Unbundling

- * Instead of depending on telcos to provide carrier grade Wi-Fi, *unbundle* the different components so that each can be taken up different related entities such as the following:
 - * **Wi-Fi access point at local shops to provide local content including product promotions and advertisements and Internet connectivity to its customers**
 - * **Authentication provided through a centralized authentication registry**
 - * **Payment solution provided by a payment registry**
 - * **Backhaul and bandwidth provided by Internet Service Provider**
- * **Completely federated model with citizens putting up Do-It-Yourself Wi-Fi access points (much like HAM radio operators), sharing bandwidth to potential users**
 - * **Security and Privacy concerns -> leave it to providers??**
- * **Need Regulatory guidelines on “unbundling” Wi-Fi at various levels: bandwidth and access, content, backhaul.**