

# **VoIP: REGULATORY CONSIDERATIONS**

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# **REGULATORY CONSIDERATIONS FOR VoIP**

## **Definition of VoIP:**

VoIP is the transmission of voice using Internet Protocol, which is basically a data transmission protocol.

- Internet Protocol is one of many packet switch protocols used in data transmission. Others include Frame Relay, Asynchronous Transfer Mode, X-25 and other propriety protocols.
- Voice can be conveyed over any packet-oriented transport protocol by breaking it into small packets, i.e. by converting into data.
- VoIP i.e. packetized voice is processed by a series of store-and-forward switches (called routers) which introduce delay. Quality of service (QoS) depends on the cumulative delay introduced. To minimize delay and improved QoS, you need large bandwidth.

## **VoIP – a service or technology?**

- VoIP can be used in any segment of telecommunication network, either last mile, transmission network, at local switch level or international links.
- It can be deployed to provide very unique services, such as non-geographic numbering service.
- It has various deployment possibilities and can be used to convey voice, video, data and multimedia information.
- For regulatory purposes, it is best to regard VoIP as a technology rather than a service.

## **Advantages of VoIP:**

- It allows more efficient use of network resources, hence leading to cheap service provision.

- It enables a single network platform to be used for the conveyance of voice, data, video and multimedia simultaneously.
- It simplifies signaling and allows the provision of innovative services which hitherto would have proved either impossible or too costly to implement using traditional TDM voice technology.

### **Disadvantages:**

- It requires large bandwidth for effective implementation and tolerable quality of service.
- Its use in the last mile provision is still costly.
- Requires additional equipment to connect it to legacy PSTN for last mile access.

### **FUTURE OF VoIP:**

- VoIP will eventually catch up with and even overtake legacy TDM-based networks.
- Service providers must adapt to VoIP in the next few years, otherwise they run the risk of dying a natural death.
- Regulators must encourage the use of VoIP, or else they will stifle innovation and will deprive consumers of cheap services.