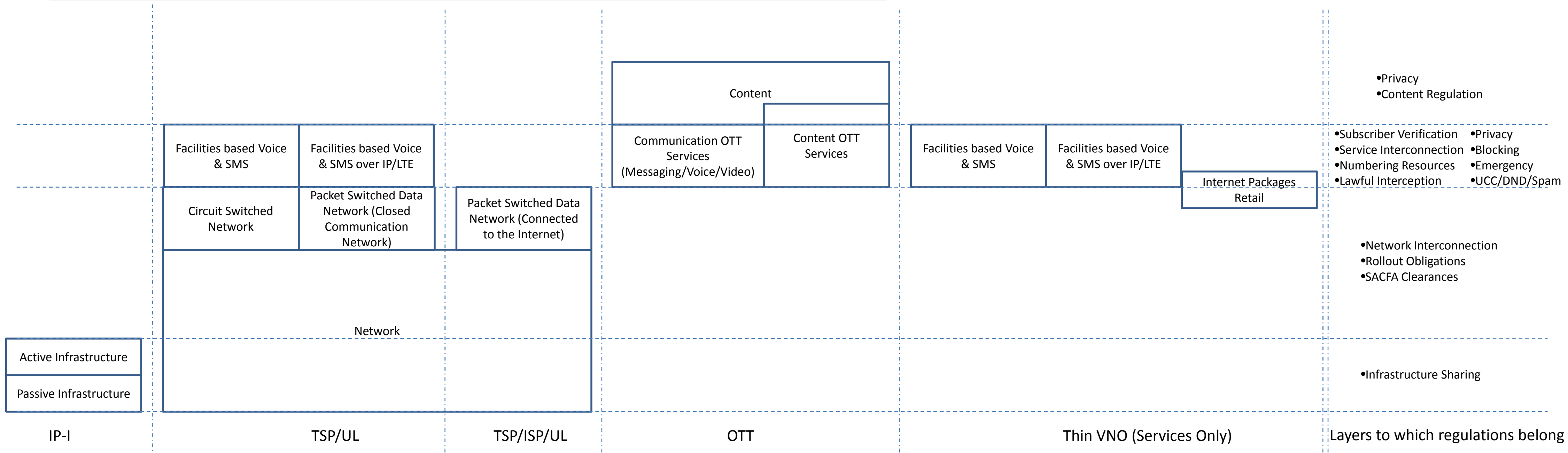


Comments on Pre-consultation paper
on
'Delinking of license for networks from delivery
of services by way of virtual network operators'

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Need for Layered Approach for Delinking Networks from Services to Determine Which Regulation Belongs to Which Layer



Layered Approach

- In the same layer, three distinct categories emerge for services:
 - TSPs integrated facility based voice/messaging services
 - VNOs leased facility based voice/messaging services
 - OTTs voice/messaging services
- Will these three categories in the same layer be treated at par with respect to the following regulations?
 - Lawful interception
 - Subscriber Verification
 - UCC/DND/Spam/Messaging Limit
 - Service Interconnection – If yes, numbering resources for OTTs as well?
 - Emergency
 - Encryption
 - Licensing
- The suggested layer-wise regulations are provided in the image. It is suggested that all three services in the same layer be treated at par. Either reduce regulations for TSPs or increase regulations for OTT and VNO.
- Will a TSP be allowed to delink its integrated facility based services from its own network? In that case, will the TSP have a separate license for the network and a separate license for the services? Will the regulatory requirements be split accordingly between the two licenses?

Other Points of Consideration

- Potential Market For VNOs
 - Potential 1: In most circles, a single service provider does own spectrum to provide all three services: 2G, 3G and 4G. A VNO may emerge that offers all three services in a circle.
 - Potential 2: Many operators are regional and do not offer pan-India services as they do not own spectrum in all circles. A VNO may emerge that offers pan-India services using the networks of the regional operators.
 - Potential 3: Many devices run on specific bands and customers are unaware of this limitation. For example, most customers are unaware that the Apple iPhone runs on 1800 MHz FD-LTE but not on a 2300 MHz TD-LTE. A VNO may emerge that provides services for all these bands regardless of the limitation of the device.
- There is sufficient over-capacity for VNOs to exist. In every circle there are 7 operators out which the top 3 have captured 80% of the market. The remaining 4 operators have their networks under-utilised, which can be leased for VNOs.
- On the lines of a Reference Interconnect Order (RIO), a Reference VNO Order will also be required to ensure that incumbent operators do not use their vertical integration to deny competition at the service level by using their market power at the network level.
- The regulatory compliance costs need to be considered. Phase-wise implementation is turning out to be complicated. First UASL, then UL, then Network License and Service License, next OTT licenses as well for the same layer, next a license for converged services including M2M. Therefore, farsighted measures need to be taken that prevent fragmentation of licenses and migration paths.
- TSPs already behave like VNOs because the likes of Ericson and Nokia currently own most networks and the TSPs lease them.