Q.9 Are there other issues that you would like to bring to the attention of the Authority?

Yes. We would like to start first with the definition of OTT . This entire consultation paper is focused on OTT on TSP's network, however the OTT is a service which is also provided on Broadcasting network like cableTV.

OTT services which are provided on Broadcasting network need also to be addressed in all the stages of consultation. It is very relevant at this point for two reasons.

Firstly the regulatory framework of the OTT, Broadcasting network like cableTV and TSP industry are vastly different. The same video content which over regulated on broadcasting network is being delivered through OTT service on the same OTT CPE to same customer without any regulation. The entire regulatory framework need to be aligned to allow level playing field to OTT, TSP and CableTV and DTH operators

Secondly OTT service through TSPs are centred on Mobile devices, where as OTT services on fixed line networks like cable TV centres around fixed CPE's addressing many other services of the smart-home requirements.

Now reply to the other questions sequentially:

Q.1 Which service(s) when provided by the OTT service provider(s) should be regarded as the same or similar to service(s)being provided by the TSPs. Please list all such OTT services with descriptions comparing it with services being provided by TSPs.

1. VoIP. OTT services like what WhatsApp provides which competes with VOIP services which presently being used by TSPs.
2. SMS: Probably text messaging services of TSP's has substantially been cannibalised by OTT apps of Whatsapp, FB.
3. Linear Video Content: OTT services like Netflix and Hotstar competes with Broadcasting of linear TV content by CableTV, DTH and IPTV services provided by TSPs.
4. Social networking video, audio and images on OTT
5. Emergency service could be effectively implemented through OTT platforms
6. Smart-Home services on OTT platform through STB have been launched in some networks.

Q.3 Whether regulatory or licensing imbalance is impacting infusion of investments in the telecom networks especially required from time to time for network capacity expansions and technology up-gradations? If yes, how OTT service providers may participate in infusing investment in the telecom networks? Please justify your answer with reasons.

Regulation, like that done for net neutrality, took away the option of either a TSP or an OTT service monopolizing services. That said, licensing should be fair to OTT, TSP and Broadcast service providers to operate in their own space. Higher OTT usage will automatically lead to TSPs infusing investment to upgrade networks to meet high data consumption demand, especially with large usage of video

and audio services. The key factors driving the growth of OTT market are increase in the number of Smartphone users, increasing household broadband penetration, increase in customer base and advertisement consumption, and also cloud services. Some of the newer trends of this industry are availability of high speed internet, rise of E-commerce and banking, and movement from Linear to online interactive services.

However, the expansion of OTT market could be hindered by present regulatory imbalances between existing Broadcast service providers ,TSP and OTT in legal and regulatory aspects.

Q.4 Would inter-operability among OTT services and also inter-operability of their services with TSPs services promote competition and benefit the users? What measures may be taken, if any, to promote such competition? Please justify your answer with reasons.

The OTT market is still in infancy. It needs lots of innovation, which is presently the key driver.

However, interoperability through collaboration of OTT players could be beneficial in the long run, where it will be easier to deliver services through standardized technology.

Either standards or guidelines are discussed and made available through regulatory bodies, Or in absence of which the industry itself must come together and collaborate to create the specifications that address commoditized elements of the value chain. Standardisation would provide boost to the entire ecosystem with significant upside.

Firstly, costs can be reduced. Rather than building and maintaining many expensive customized solutions for non-differentiating components, companies can save money by building against proven standards or guidelines. Secondly companies can bring services to market more quickly when they are based on standards or best practices.

Finally, there's the opportunity to create consistency of experience for consumers across providers.

When the ecosystem operates under the standardised guideline consistently, reliably and quality improve leading to huge adoption.

Collaboration is done with or without regulatory supervision through industry forums and organizations such as the Society for Motion Picture, Television Engineers, the Consumer Technology Association, the Streaming Video Alliance, Ultra HD Forum, Alliance for Open Media, etc. by providing an open place for engineers to collaborate, such as specific working groups focused on commoditized areas, these forums engender an ethos of transparency as participants work together to create solutions to critical challenges from which they will all benefit.

And, finally, many of these forums promote the proof-of-concept process, where a group of companies puts the documentation into practice to demonstrate to the market how component operation can be accomplished based on the designed specification. Example: Streaming Video Alliance—all three competitors in the watermarking space are all collaborating on a best practices document for forensic watermarking.

Q.5 Are there issues related to lawful interception of OTT communication that are required to be resolved in the interest of national security or any other safeguards that need to be instituted?

Should the responsibilities of OTT service providers and TSPs be separated? Please provide suggestions with justifications.

One of the major challenges overseeing from national security perspective in OTT mechanism is being able to ascertain the source and distribution chain of the content. With present implementation of OTT it is very difficult. However usage of Bock Chain technology would be very useful for this purpose. Though usage of Block-chain for VOIP or chat may be uneconomical 'over-kill', but for streaming video applications it would be beneficial in OTT space.

Q.6 Should there be provisions for emergency services to be made accessible via OTT platforms at par with the requirements prescribed for telecom service providers? Please provide suggestions with justification.
Yes. An alternate emergency service is always useful for access via OTT platforms. An OTT platform can aggregate a large number of emergency services ranging from hospital, fire, police etc. with different priority levels. Standardization can help.

Q.7 Is there an issue of non-level playing field between OTT providers and TSPs providing same or similar services? In case the answer is yes, should any regulatory or licensing norms be made applicable to OTT service providers to make it a level playing field? List all such regulation(s) and license(s), with justifications.

This entire consultation paper is focused on OTT on TSP's network, however the OTT is a service which is also provided on cableTV network. OTT services which are provided on Broadcasting network need also to be addressed in consultation. The regulatory framework of the OTT, CableTV/DTH and TSP industry are vastly different even when the same video content which over regulated on broadcasting network is being delivered through OTT service on the same OTT CPE to same customer without any regulation. The entire regulatory framework need to be aligned to allow level playing field to OTT, TSP and CableTV and DTH operators.

Q.8 In case, any regulation or licensing condition is suggested to made applicable to OTT service providers in response to Q.7 then whether such regulations or licensing conditions are required to be reviewed or redefined in context of OTT services or these may be applicable in the present form itself?

Yes as detailed above.

Regards

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