IPTV India Forum Response to the Issues raised in the TRAI Consultation Paper on Mobile TV Services

1. Whether the technology for mobile television service should be regulated or whether it should be left to the service provider.

The consultation paper has clearly brought out that the mobile TV technologies are evolving. Whether it is point-to-point connectivity approach through 3G networks or broadcast mode approach, several variants with ever improving performance are evolving. Under these conditions, choice of one technology is fraught with danger and a better course will be to let the market decide. Towards this end, regulatory step needed is to allocate trial spectrum and encourage as many trials as the market wishes to carry out. The advantage of a single technology as standard is applicable when scale-of-deployment advantages are quite distinct. In today's scenario, at least two mobile technologies viz. GSM and CDMA are being extensively used (numbers run into tens of millions – by no means either technology can be regarded as miniscule so far as its presence is concerned). It is quite likely that handsets capable of receiving more than one type of mobile TV transmission will become standard. In such a situation choosing any one technology would unnecessarily restrict the freedom of operators who would prefer to make choices themselves, based on their specific business case, rather than have the policy maker and the regulator making the choice for him.

2. **If the technology is to be regulated, then please indicate which technology should be chosen and why? Please give reasons in support of your answer.**

In light of the views expressed in response to Q1 above, this question does not arise.

3. **What will be the frequency requirement for different broadcast technological standards for terrestrial and satellite mobile television transmission in India?**

Currently VHF and UHF bands are being used for TV transmission in India. With the greater use of cable TV and the decision to go for more frequency efficient digital terrestrial broadcast, India is well placed to exploit the 700 MHz band for mobile TV operations. This band is particularly well suited for terrestrial broadcast and using it for mobile TV should be very useful considering that the handsets are operating in the nearby 800 and 900 MHz bands. So far as satellite transmission is concerned, upper UHF band depending on its availability could be considered. However, a survey of world market with regard to equipment availability will be essential to minimize costs.

4. **Which route will be preferable for mobile TV transmission – dedicated terrestrial transmission route or the satellite route? Should the mobile TV operator be free to decide the appropriate route for transmission?**

Going by the international trials, it appears clear that majority of nations are opting for the terrestrial route. One drawback with the satellite route is that satellite based signals are usually weaker and therefore in-building coverage could be a major problem. One alternative is to use a combination of satellite and terrestrial methods. It is thus evident that the terrestrial route appears to be better. The task before the regulator would, however, be to make both routes available and let the industry choose the one considered optimal by the operator who is proposing to offer this service.

5. **How should the spectrum requirement for analog/ digital/ Mobile TV terrestrial broadcasting be accommodated in the frequency bands of operation? Should mobile TV be earmarked some limited assignment in these broadcasting bands, leaving the rest for analog and digital terrestrial transmission?**

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6. **In the case of terrestrial transmission route, how many channels of 8 MHz should be blocked for mobile TV services for initial and future demand of the services as there are nearly 270 TV channels permitted under down linking guidelines by Ministry of Information & Broadcasting?**

There are 3 channels in VHF band I (not used much), 8 channels in VHF band III (used extensively for analog terrestrial broadcast), 14 channels in UHF band IV (used fairly extensively for analog TV broadcast and two channels are used for digital TV broadcast) and 28 channels in UHF band V (currently not being used for either analog or digital broadcast). Due to

high tower heights used by Doordarshan and the propagation characteristics in these bands, signal used at one location acts as an interfering signal even up to 200 kms away and therefore careful frequency planning is needed for analog TV broadcasting to cover large number of towns. It is for this reason that even though 25 channels are available for analog and digital TV broadcast below UHF band V, there may be a requirement for reserving at least 5 or 6 channels in the UHF band V for future requirements of digital TV transmission. Even if we leave 14 channels in band V, we still have 14 channels which can be reserved for mobile TV transmission in the terrestrial mode.

It is therefore proposed that to begin with 14 channels in the UHF band V in the frequency range 582 to 806 MHz may be reserved for mobile TV. If auctions are held for allocation of two channels per mobile TV service provider, a total of 7 service providers can enter the market which will provide an excellent level of competition. Each service provider will then be able to offer 40 to 50 channels each of 2 MHz band width. In course of time more channels can be earmarked for mobile TV and some spectrum can be kept free for such a practical situation.

7. **Whether Digital Terrestrial Transmission should be given priority for the spectrum over mobile TV, particularly in view of the fact that the mobile TV all over the world is essentially at a trial stage.**

The results of the trials worldwide have shown that there is a huge potential for this service. Cellular mobile service providers wishing to

increase their mobile services customer base and revenues are in advanced stage of trial and may introduce the service soon. In India too several cellular service providers are keen to offer the service but await regulatory clearance for operating terrestrial broadcasting and thereafter allocation of spectrum. Once the private operators are permitted to offer terrestrial broadcasting, the field will become level for both and operators of both types of services will come forth to offer services. Market will then determine the growth of one or the other or both types of services. The question is therefore not of priority of mobile TV service over digital terrestrial broadcasting or vice versa but that of the regulations creating the necessary environment for the two services. The suggestions given in the reply to Questions 5 & 6 above take this approach with regard to frequency allocation.

8. **Whether the frequency allocation for the mobile TV should be made based on the Single Frequency Network (SFN) topology for the entire service area or it should follow Multi Frequency Network (MFN) approach?**

SFN appears to be a more efficient approach for frequency allocation and world wide this approach appears to be more popular. Therefore, it is suggested that SFN approach be used in India.

9. **Whether frequency spectrum should be assigned through a market led approach – auctions and roll out obligation or should there be a utilization fee?**

Market led approach based on auctions is a more transparent method of frequency allocation and the approach similar to the one used for FM radio should be adopted.

10. What should be the eligibility conditions for the grant of license for mobile television services?

Conditions similar to FM radio for eligibility and disqualifications should be applied for mobile TV licenses also.

11. Whether net worth requirements should be laid down for participation in licensing process for mobile television services? If yes, what should be the net worth requirements for participation in licensing process for mobile television services?

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17. Whether the licenses for mobile television service be given on national/ regional/ city basis?

Unlike FM radio, the programmes transmitted are likely to be of national and regional interest rather than city interest. Licensing should therefore be on the same basis as the cellular mobile licenses. The net worth requirements should therefore be similar to the cellular mobile / UASL services. At a later stage when MVNO concept is brought in, the possibility of value added mobile TV service based on active infrastructure sharing can also be considered.

12. What should be the limit of FDI and portfolio investment for mobile television service providers?

It is better to have the same FDI limits in telecommunications and broadcast TV services particularly because once 3G services start, those operators without a separate license will be able to offer mobile TV though restricted to video clip streaming and video on demand.

13. What should be the tenure of license for the mobile service operators?

This should also be similar to the cellular mobile service providers or at least formulated on similar lines i.e. an initial period with facility to renew for at least another five years.

14. What should be the license fee to be imposed on the mobile television service providers?

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15. Whether in view of the high capital investment and risk associated with the establishment of mobile television service, a revenue share system would be more appropriate?

A revenue share system would be more appropriate. The norms should be similar to the FM Radio license norms.

16. Whether any Bank Guarantee should be specified for licensing of the mobile television service providers? If yes, what should be the

amount of such bank guarantee? The basis for arriving at the amount should also be indicated.

The real requirement is to ensure that spectrum allocated is not hoarded and therefore a ‘use it or lose it’ condition with a time frame specification should be included. In such a situation bank guarantee which is meant to ensure implementation may not be required or if insisted upon can be a nominal amount.