

**COMMENTS ON TRAI CONSULTATION PAPER No 15/2008**  
**INTERCONNECTION ISSUES RELATING TO**  
**BROADCASTING & CABLE SERVICES**

By

**Lt Col (Retd) VC Khare, Cable TV Industry Observer**

**Introduction**

1. Multi-channel television content delivery over uni-directional wireline is more than 20 years old in India. It was originated and promoted by total private initiatives and investments. Up to 1994, aggregation of Broadcast TV content and its delivery over wireline medium, till a connectivity of 20 million was reached, was spearheaded by now vanishing Distributors in Cabled Broadcast Services. Till 2004, Cabled Broadcasts were not legal till Cable TV Networks Regulation Ordinance 1994 was promulgated, and later converted to an Act in 1995. This statute remained monumental without a political will to enforce it.
2. Cable TV act signalled legalization of this initiative and the country witnessed the emergence of MSOs and their distributors, consolidation of Headends, proliferation of number of channels to the extent of analogue spectrum congestion in 47 to 550 MHz space. In Apr 1999, Digitalization and Addressability of content at Headend levels surfaced with PAY TV phenomenon being introduced by the Broadcasters. This was nothing but CAS at Headend operator's level. It brought in monopolistic practices in terms of differing negotiated rates, arbitrary escalations, practices in not returning signed copies, switching off content delivery and resuming at their terms, but never refunding the amounts charged for periods of switch offs. Soon the analogue spectrumwidth got enhanced to 47-862 MHz band and number of channels increased from 60 to 92. Then with turmoil caused, Cable Act was amended in 2002, to introduce addressability, but was not implemented till judicial intervention in 2006. As a counterpoise, the phenomenon of carriage fee was adopted by Network Service Providers. Broadcasters who, till then, were used to revenue receipts only were, for the first time, confronted with payouts or bargains. Whatever discomfort the Broadcasters are crying about now is a mirror image of what they did to Cable Operators, such as :-
  - (a) Not disclosing the basis for costing the channel rates.

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- (b) Discriminating rates between different distributors at different locations.
  - (c) Arbitrary revisions thrust upon service providers.
  - (d) Lack of concern about QoS (Quality of Service) and QoE (Quality of Experience) of viewers.
  - (e) Arm twisting of Headend Operator to extract arbitrary increases in PAY TV subscriptions.
3. The business costs of TV content delivery comprise of the following:-
- (a) PAY TV content charges levied by Broadcaster's agents.
  - (b) Access charges for operating the Headend, both for Free to Viewer and PAY TV content
  - (c) Right of Way payments
  - (d) Taxes.
  - (e) Establishment charges
  - (f) Maintenance Charges
  - (g) Consideration for Providing Services.
  - (h) Grafts for networking peace.
  - (i) Video Rights for Local Content
  - (j) Depreciation and Upgrade costs for networks.
  - (k) Costs of programming guides including ingesting.
  - (l) Influential people availing services but NOT paying for the same.
4. Any attempt to rationalize interconnect agreements should also cover the aspects listed in para 3 above.

### **Comments On Issues For Consultation In Paper No 15/2008**

5. **6.2.1** The Interconnection Regulation must make it mandatory for the Broadcasters to publish RIOs for all addressable systems. The RIOs may vary in terms of consideration for ROW (Right of Way) for wireline services in the business model. For uniformity in business model the standard drafts may vary for Cabled Broadcasts, IPTV and TV on mobile, because QoS and QoE for all platform will differ. But for the same platform the agreements should be identical.

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6. **6.2.2** 'Must Provide On Request' should be mandatory for Broadcasters. Provision should be made for penalising discrimination, evasion of response or denial. On specific complaints, revocation of license should be the penalty.
7. **6.2.3** CAS will differ with every service provider. STBs with embedded CAS cannot be inter-operable. STBs must be provided by service provider, as part of service, against a non-interest bearing refundable security deposit, and a monthly lease rent to ensure their serviceability and upgradation without any burden on end user. The wish list in the Annexure would then be meaningful. Somewhere, the regulator and policy maker shall have to choose between 'cheapest' and 'minimum acceptable quality', because quality cannot be cheap. The STBs in IPTV will be bi-directional, but those for Cable TV must have return path capability. Subscriber systems must have pre-defined scalability. STBs with HDD should allow access only for 24 hours with copying protection for any content downloaded. The SMS must generate the following MIS:-
  - (a) No of Subscribers
  - (b) No of Active STBs
  - (c) No of Channel wise subscribers and total monthly revenue accruing per channel
  - (d) Taxes accrued, realized and remitted to treasury.
8. **6.2.4** The system for granting permissions for addressable platform must design application forms to include and reflect conformity to ingredients to satisfy parameters indicating the technical compliance with declarations to that effect. The Controllerate should have staff for physical checks and periodical audits. Broadcasters should lay down conformity to such parameters for requests to provide content.
9. **6.2.5** Since all content will never be PAY, in Cable TV systems, Free to Viewer(including local originations) shall continue to be analogue, wherein STB will not be required, and hence hybrid networks shall co-exist. In IPTV, DTH and HITS(for Pay TV only), STBs will become a technical compulsion. However,

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digital content in IPTV need not be encrypted as per current regulations. Cable TV systems in CAS and HITS environment must respond to norms for addressable systems with provisions for RF by-pass for un-encrypted analogue demodulation by circuit of TV receivers. In voluntary CAS areas, platforms would turn digital only to enhance content volume to compete with threatening alternatives and hence content may NOT be encrypted to avoid payment of royalties to encryption system providers. STBs can be addressed without encryption also.

10. 6.2.6 Commercial subscribers are those which are not domestic and do not reside permanently at premises of subscription, i.e. patients in hospitals, tourist guest houses/hotels, TV show rooms, News Gathering Agencies and Media Research Organizations. Since commercial rates are likely to be higher than domestic rates, delivery of signals with equal clarity of audio and video over all channels, conforming to end of line specifications as per IS 13420 must be mandated. Commercial Subscribers must have a separate family of IDs. Commercial subscribers must be identified distinctly through a signed inter-connect agreement rather than dictates of a Broadcaster.
11. 6.2.7 Yes ! Broadcasters must be mandated to conclude and publish inter-connect agreements to be categorized as a 'Commercial Subscriber Interconnections' on all platforms.
12. 6.2.8 The regulations must mandate publication of RIAs.
13. 6.2.9 The Broadcasters must rate the PAY content on 'A-la-Carte' basis for all platforms, with rates negotiated for a definite period of validity, to avoid mutual mud-slinging. Headend/Central Office Operators may be permitted to bundle or pack bouquets, if making business sense.
14. 6.2.10 RIOs must be replaced with RIAs keeping the same time frame of 45 days.
15. 6.2.11 Bundling/packaging of content by Broadcasters must be prohibited.
16. 6.3.1 RIA, NOT RIO, should form the basis for accountability in business. RIAs should clearly mention 'A-la-Carte' rates offered as well as negotiated. The negotiated rates would form the

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basis for revenues accruing for a pre defined period of validity in which upward revisions shall be prohibited. Service providers may be allowed bundling, clearly disseminated to subscribers. This should be similar to the practices for DTH.

17. 6.3.2 'A-la-Carte' rates for PAY TV content being contracted , validity period for the agreement and prohibition against upward revision of rates during the validity period, must be provisioned.
- 18 6.4.1 Since the Broadcaster is in the business of selling his product to the subscribers of network service providers, the burden of establishing fulfilment of regulatory requirements on QoE must rest with them. But since the ultimate cash outflows would emanate from subscribers, QoE satisfaction aspect of the end user must also be introduced.
19. 6.4.2 The subscriber in 47-550 or 47-862 MHz spectrum in Cable TV networks is entitled to equally clear reception of all channels in this spectrum width. This condition can only be fulfilled if distribution hardware conforming to Indian Standards, as mandated under Section 9 of the Cable TV Networks Regulation Act 1995, is enforced, amplifiers cascade does NOT exceed 16 in Coaxial Cable Networks or 3 in coax portion of HFC and NOT more than two jointers are used between amplifiers, EOL parameters are recorded in the commissioning report and networks are certified by an accredited certifying agency, at least once in a year. The application form, for renewals of permission/license, should include attachment of such certificates. In order to prevent corruption in issue of such certificates, super auditors have to be established who can counter-check on complaints, and if the certification is found false then the certification agency should be prosecuted and de-barred from certification for life. Such certification would apply to the analogue transmissions portion of the spectrum in Cable TV networks only, because STB outputs in other modes i.e. digital content over coaxial cable, DTH and IPTV would be on 'Video Mode' of the TV set through 'AV' output terminals of STB. In times to come,

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PAY TV transport in Cabled Broadcast shall be compressed and hence capacity per analogue channel spectrumwidth would enhance 10 times, or more, with equal clarity in Sound and Video signal. But many channels would NOT go PAY. Being Free to Viewer, they would survive in business. Depending on popularity, they would like to be visible in clear zone. This is where carriage fee is likely to be demanded. Carriage fee is a reaction to un-ethical pressures exercised by Broadcasters on Headend Operators, and hence would mirror their experience as 'Tit for Tat' human behaviour. However, with increasing digitalization of Headends and softer terms for provision of STBs, this phenomenon may die a natural death. Terms of Interconnect agreements of PAY TV content should be without bias on carriage fee. Broadcasters should resist carriage fee demands by not giving decoders to operators demanding carriage fee.

20. 6.4.3 Carriage fee may be regulated by making it a part of Interconnect Agreement, where contracted, seeking details of placement of the channel on the map and EOL at the farthest point in LCO's domain at randomly selected test points whose location would be mentioned in the ICA. This may accord sanctity to such practices. TAM and TRP readings are reflections of watching pattern in a very small sample universe and cannot reflect the popularity of content seeking space in network bandwidth for Free to Viewer content. Stability is a function of operating parameters of hardware in a network, transparency pertains to negotiated terms which should form part of ITA, and predictability would depend upon real popularity and demand in LCO domains, aggregated in the Headend SMS, while periodicity will be the same as practiced for PAY content of duration of the agreement.
21. 6.4.5 MSOs, approved as CAS Service providers have established turn-around of TV content, digital compression encryption and STB financing, thrust upon them through the Delhi High Court judgement. Except franchises of WWIL, holding HITS permission, none other has HITS permission and all of them are using a different CAS encryption with

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Corresponding embedded decryption. These MSOs may not find business sense in going for satellite re-transmission in C Band. One possible solution could be amending DTH guide lines to allow DTH signal, all digital, to be allowed as DTO (Direct to operator) Headend on earth, converted from QPSK to QAM (as opposed to QPSK to AV demodulation in DTH STBs) and decrypted at cable viewer's end through compatible STBs. This can cause substantial savings, improve quality at the viewer's end and bring down costs, besides enhancing scalability for DTH service provider. Even the Free to Viewer content quality will improve and digitalization of Cable networks can be expedited.

22. 6.4.6 Standard Interconnect agreement between the Broadcasters and CAS service providers would suffice, in letter and spirit, in HITS environment also.
23. 6.4.7 Regulatory measures in QoS and Redressal of Grievances Regulations 2007 are considered adequate. The unfortunate part is that they have NOT been implemented in practice. Regulations unless enforced tend to remain monumental.
24. 6.4.8 Terms of Service for DTH subscriber, as enshrined in the Manual, to be issued, as mandated, should confine availability of channel conforming to terms of contract between Broadcaster and DTH operator. Once the ICA expires, the Broadcaster will take the channel off the transmission schedule. Hence its availability too shall cease for re-broadcast.
25. 6.5.1 Yes ! All interconnect agreements must be reduced in writing, signed and witnessed with copies provided to service providers and regulators to be referred in any adjudication.
26. 6.5.2 Yes ! since ICAs are being concluded in writing, it is NOT difficult to impose this condition to inculcate discipline.
27. 6.5.3 Only agreements executed, signed and witnessed have sanctity. They need NOT be registered. Without a written agreement NO protection should accrue to distributors. Once formats are standardised, printing the same on non-judicial stamp papers does not take much time.

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28. 6.5.4 On the copy to be filed with the regulator, distributor should endorse 'Received ICA Copy duly signed by Broadcaster' and sign with date and time.
29. 6.5.5 As per current practices, ICAs also imply issue of Decoders. Since LCOs don't operate Headends, ICAs concern only the Broadcaster and Headeend operator. Hence Broadcaster should be responsible to deliver signed copy of agreement to Headend operator, whether CAS service Provider, Cable MSO, DTH Operator, Telco providing IPTV or Mobile TV services. Interconnect agreements between MSOs and LCOs, in CAS environment, pertain to rates per declared subscriber, and retention of 'Free to Viewer' revenue to be retained by LCO. The agreements authorize the Headend operator to retain 100% carriage fee.
30. 6.5.6 Yes !
31. 6.5.7 The ICA system should be enforced and necessity for reviewing periodicity should arise only after the system is reasonably established.
32. 6.5.8 In case of revision of periodicity, information should be filed within 15 working days.
33. 6.5.9 Not more than 15 days.
34. 6.5.10 Not more than 8 years.
35. 6.5.11 If acceptable, as valid documentary evidence, in courts of law.
36. 6.5.12 No !
37. 6.5.13 Complainant should be given higher weightage when hearing a complaint.