February 05, 2018

The Telecom Regulatory Authority of India ('TRAI')
Mahanagar Doorsanchar Bhawan,
Jawaharlal Lal Nehru Marg,
New Delhi – 110002

Ref: Consultation paper dated December 22, 2017 on Empanelment of Auditors for Digital

Addressable Systems (**"Consultation Paper"**).

Dear Sir,

At the outset, we thank TRAI for providing us an opportunity to submit our views on this consultation paper and the cause thereof.

With best determination and effort to support TRAI in establishing a uniform environment by way of effective audit framework in the Broadcasting and Cable TV industry, we would like to submit our comments/ observations/response for TRAI's consideration.

In view thereof, please find enclose herewith our comments on the issues raised in this Consultation Paper for your kind perusal.

For any further clarification, you may write to us or contact us.

Yours Sincerely,
For IndiaCast Media Distribution Private Limited

Authorized Signatory

Encl: As above

COMMENTS OF INDIACAST MEDIA DISTRIBUTION PRIVATE LIMITED

TO

CONSULTATION PAPER DATED DECEMBER 22, 2018 ON

EMPANELMENT OF AUDITORS FOR DIGITAL ADDRESSABLE SYSTEMS

It is imperative that for an accelerated growth of the broadcasting and cable TV service ("B&CS") industry, the authorities should be prudent and not over regulate which may stunt growth of the sector. The need of the hour is to establish and nurture strong collaboration between the stakeholders in the value chain and ensuring benefits, which should be the main objective of any regulatory reform. The objective of fostering competition, reducing disputes, maintaining transparency efficiently and sustainable orderly growth can be achieved only through mutual support and cooperation among stakeholders. Further, a myriad of regulation would only restrict accelerated progress and off-track primary objective of implementation of digital addressable system in the B&CS industry.

The industry had hoped that in keeping with TRAI's stated policies, the TRAI regulations and Tariff order would usher highly competitive pay TV market with multiple digital platforms offering diverse content and choice to consumers. However, it is our humble submission that the proposed regime instead, seeks to introduce more stringent, onerous and intrusive regulatory dispensation, thereby attempting to virtually micromanage the activities and that too only in respect of one stakeholder, i.e. broadcasters, by regulating inter alia pricing, discounting, manner of offering, bundling and also curtailing broadcasters' right of conducting audit of DPOs, and thus leaving high uncertainty on the subscriber base of the DPOs which will consequently affect subscription revenues. This would also create a fertile ground for disputes and avoidable litigation that could never have been the intent behind undertaking the instant exercise for empanelment of auditors.

Before we respond to the issues highlighted in the Consultation Paper on Empanelment of Auditors for Digital Addressable Systems ("**Consultation Paper**"), we set out below our preliminary response without prejudice to our rights and contentions to the Telecommunication (Broadcasting and Cable) Services Interconnection (Addressable Systems) Regulations, 2017; the Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017 and the Telecommunication (Broadcasting and Cable) Services Standards Of Quality Of Service And Consumer Protection (Addressable Systems) Regulations, 2017 All Dated March 3, 2017 Which Is Sub-Judice Before The Various courts and also reserving all our rights under law, equity or otherwise.

Preliminary Submissions:

1. **TRAI's notifications of March 03, 2017 are *sub-judice* and pending before Hon'ble Madras High Court and Hon'ble Delhi High Court:**

   It is respectfully submitted that the very foundation of this Consultation Paper issued by TRAI is based on the notifications dated March 03, 2017 ("**Impugned Regulations**") which cover

technical and commercial arrangements between Broadcaster & DPO and DPO & Local Cable operator for distribution of television channels. These regulations are *sub-judice* before the Hon'ble High court of Madras and Hon'ble High court of Delhi. It is submitted that the present Consultation Paper on empanelment of auditors covers one of the contentious aspects of the Impugned Regulations. Hence, the issue with respect to regulatory interference on empanelment of auditors and the related guidelines may be determined only after clarity on decision(s) of Hon'ble Court(s).

2. **Clause 10 and 15 of the Telecommunication (Broadcasting and Cable) Services Interconnection (Addressable Systems) Regulations, 2017 dated March 03, 2017 ("Interconnection Regulations") have lacunas and are practically unenforceable:**

The present exercise by TRAI should have been conducted before framing of clauses 10 and 15 of Interconnection Regulations. It is submitted that TRAI ought to have conducted analysis on analysis on practical difficulties that would be faced by stakeholders (including auditors) and misuse of the stipulations by DPOs. In this regard, it may be noted that issues raised in present Consultation Paper one again raises serious issues with respect to implementation of Clauses 10 and 15 of Interconnection Regulation.

It is submitted that Clause 10(7) of Interconnection Regulations dated March 3, 2017 states that:

"If a broadcaster before providing signals of television channels is of the opinion that the addressable system, being used by the distributor for distribution of television channels, does not meet the requirement specified in the Schedule III, it may, without prejudice to the time limit specified in sub-regulation (2) of the regulation 3, cause audit of the addressable system of the distributor by M/s. Broadcast Engineering Consultants India Limited, or any other auditor empanelled by TRAI for conducting such audit and provide a copy of the report prepared by the auditor to the distributor…"

It is not clear as to how the broadcasters will form the opinion as stipulated in the aforementioned clause of Interconnection Regulations without conducting the audit of the DPOs. It appears that the right of the broadcasters to check the veracity of the systems of the DPOs is being replaced by a mere declaration of the DPO regarding compliance of its systems with Schedule III of the Interconnection Regulations, which cannot be verified without conducting audit of DPOs systems by the broadcasters.

It is also pertinent to mention here that the prevalent provision of Clause 10(7) of Interconnection Regulations which deals with the Technical Audit does not sufficiently cover Broadcasters' concerns as it has completely relied on the declaration submitted by the DPOs regarding change in configuration or version of the addressable system, which facts at times may be concealed by the DPO, and further broadcaster can only request for audit to be conducted by the empaneled auditors only if there in change in such configuration of addressable system.

Further, the prevalent provision of Clause 15 of Interconnection Regulations also, lacks to sufficiently cover Broadcasters' concerns since the provisions of the said clause are a perfect recipe for under-declaration of subscriber numbers by the DPOs and these provisions can also be misused by DPOs for manipulation of information to a large extent.

The provision of only one audit during the calendar year further opens the loop for the DPO to manipulate the data, since the broadcaster is open for being victim of forgery as no time is being specified for conducting the audit, and hence the DPO may keep it lagging till the year end and in the meantime DPO may submit window dressed subscriber reports under declaring the subscriber numbers since the broadcaster would not have any check on such reported numbers without having right to cause audit. DPOs may change the SMS and CAS during this one year without such declaration or notice. Infact, TRAI may consider conducting periodic audit of all the DPOs to check regulatory compliances and subscription related compliance in line with audits conducted in telecom sector. This unilateral provision of the Interconnection Regulations will not only have repercussions for the broadcasters but also on the legitimate DPOs. Hence unless such glaring infirmities of regulations are cured, and conflicts are harmonized the purpose of this Consultation Paper cannot be achieved.

The Consultation Paper at a stage, when the matters are pending before Hon'ble High Courts, on the erroneous assumption that none of the stakeholders are aggrieved by stipulations of Clauses 10 and 15 of Interconnection Regulations. It is reiterated that the reasoning of TRAI inter-alia behind framing of clauses 10 and 15 are flawed and without any basis. It is submitted that there is no need to conduct audit through empaneled auditors and the choice on how to proceed with audit should be left to the relevant stakeholders.

3. **No urgency to issue the present Consultation Paper:**

It is submitted that TRAI has itself clarified in the Consultation Paper the fact that *"It is hereby clarified that empanelment of the auditors and other related activities would be done only after the ongoing matter pending before Hon'ble courts, are decided."*. It is submitted that this Consultation Paper is issued almost 10 months after the issuance of Impugned Regulations and sufficient time has lapsed between the date of issuance of notifications and present Consultation Paper, and that no prejudice would be caused if consultation process is withheld till such time matters are not finally decided by Hon'ble Courts on all issues of the Impugned Regulations pertaining to jurisdiction as well as merits of notifications

4. **Wrong assumption relating to misuse of Audit by broadcasters:**

The very foundation of the issuance of this Consultation Paper with respect to empanelment of auditors is based on para 3.69 of the earlier consultation paper on Interconnection framework for Broadcasting TV Services distributed through Addressable Systems dated May 04, 2016 which is re-iterated hereunder -

> *"As of now more than 700 MSOs are registered for providing cable TV services through DAS. Many MSOs have raised the issue regarding delay in completion of audit by BECIL. It may result in delays in getting signal from broadcasters and this may affect their business severely. To address this problem, one possible way could be that more than one auditor are empaneled by TRAI so that delays can be minimized."*

Further in para 101 of the consultation paper on Draft Telecommunication (Broadcasting and Cable Services) Interconnection (Addressable Systems) Regulations, 2016 dated October 14, 2016 TRAI had wrongly observed that audit right maybe misused since there are 50 pay broadcasters having 250 channels which would lead to at least 50 subscription audits of each system

It is respectfully submitted that observation of TRAI is not backed by any data or analysis of any such misuse. TRAI has also not published any study or paper with respect to the issues regarding delay in audit by BECIL or delay in getting signals from broadcasters to substantiate its standpoint for any urgency in this regard. TRAI ought to publish the year on year data (for the last three

years) as to how many Technical and Commercial Audits have been conducted for big, mid-sized and small DPOs before issuing this Consultation Paper.

5. **Broadcasters should have unrestricted right to conduct Technical and Subscription Audits:**

It is submitted that there should not be any restriction on broadcaster's right to conduct audit, and that a broadcaster should be allowed to conduct audit through its own audit and technical team as this helps in concluding the audit with minimum cost and resource and within shorter turnaround time. Only in case of dispute between the parties as to the outcome of such audits, should BECIL or empaneled auditor be appointed to conduct the audit in the presence of representatives of the concerned parties. Thus, the stipulation that finding of BECIL's auditor or any empaneled auditors shall be final is arbitrary and cannot be permitted. Further, even in case the addressable system was audited in the last 1 year by BECIL or any other agency, broadcaster should have been granted the right to conduct the audit of the DPOs' addressable system to ensure technical compliance in accordance with regulations and raise technical issues if the same is found during the audit and to check if the DPOs have changed/added/revised the CAS/SMS etc.

It is submitted that the broadcasters deal with the DPOs on day-to-day basis and have domain knowledge, technical know-how market intelligence and better information about the overall commercial deal and technical aspect of the DPOs network which are based on ground facts and figures, research data available with the broadcaster. These facts and information will help the auditors in conducting the audit in transparent and effective manner. The emplaned auditor may not be aware of such ground facts and without having broadcasters involved in conducting the audit process shall give the DPOs opportunity to conceal various facts including Technical Information (number of CAS, SMS and other equipment, etc. deployed by the DPOs) and Subscription Information (subscriber report, channel packaging and placement requirements and compliance of subscription agreement, etc.). In such an event the purpose of conducting an audit will be defeated as the DPO may chose not to disclose the complete information and there cannot be any other way by which the auditor may gain knowledge of such undisclosed information about complete universe of the network.

6. **Implementation and enforcement of QoS Regulations to be integral part of Technical and Subscription Audit:**

It is submitted that there is no tooth to get any of the Quality of Service (QoS) mandates implemented on the ground as no effective penal consequences have been prescribed nor the same have been included as a part of audit under the Impugned Regulations. It is submitted that in order

to achieve efficiency, transparency and neutrality at DPOs end inter-alia for ensuring protection of interests of all stakeholders in the value chain (including consumers), it is of paramount importance that compliance of QoS regulations should form the part and parcel of the audit. It is respectfully submitted that verifiable implementation of QoS regulations is the basis of implementation of the Tariff Order and the Interconnection Regulations. Hence, the compliance of the same by the DPO should be considered by TRAI on priority.

In view of the above, we request TRAI to defer the Consultation Paper and not to proceed with the same. Without prejudice to the foregoing and grievance inter-alia to the Impugned Regulations including clauses 10 and 15 of TRAI's Interconnection Regulations, we are giving our comments to Consultation Paper under protest.

Response to issues raised by TRAI

Q1. Do you agree with the scope of technical audit and subscription audit proposed in the consultation paper? Give your suggestions along with justification?

The existing regulatory provisions which require the addressable system of DPOs seeking interconnection with broadcasters in terms of their RIO shall ensure that the addressable system used by such DPO shall satisfy the minimum specification specified by TRAI in the regulations should be continued along with other aspect mentioned below.

The scope of Audit, should include audit of systems and records of DPOs to ascertain whether they are in compliance with contractual obligations towards broadcasters. The audit should specifically include audit of: (a) Headend, (b) CAS, (c) SMS, (d) STB, (e) distribution network to ascertain CAS and SMS involved and areas covered, (f) Antipiracy measures (g) commercial/subscription audit, and (h) Inventory Management. Further, audit needs to ascertain whether the DPO has established and is maintaining necessary systems, processes & records in line with the regulatory framework (Interconnection, Quality of Service regulations and Tariff order). The compliance of QoS regulations by DPO should also form the part and parcel of audits. It is submitted that TRAI must analyze the entire eco system of digital addressable systems which are still non-compliant *inter alia* on the following counts:

1. Digital Addressable Systems in DAS III and IV Areas are still completely not in place.

2. Pre-activated STBs are given to LCOs under single address without any details and pre-activated STBs are provided to subscribers without getting the CAF filled by the customer.

3. The STBs are directly activated from the CAS and is not linked with the SMS.

4. Broadcasters have observed multiple entries of STBs are done in name of a particular LCO without subscriber details.

5. DPOs install multiple CAS on the same feed at multiple locations & face challenges in integrating the same with their SMS. The data capturing gets compromised, huge backlogs are created which is a revenue loss to broadcasters.

6. DPOs do not disclose additional CAS installed so as to under-declare their correct subscriber base.

7. DPOs install/change additional CAS & SMS without intimation to the broadcasters.

8. Historical records of subscribers, packages, channels offered etc., are not maintained by DPOs.

9. Most of DPOs are not well versed with their own system, hence they are unable to generate subscriber reports as per the regulations and are completely dependent on SMS Vendors for generating such support. This leads to challenge in ascertaining the actual subscriber base of DPO along with requisite details thereto.

10. EPG does not even show the correct channel listings and are poorly maintained both from functionality as well as regulatory prospective.

11. Most of the times DPOs evade audits despite multiple reminders.

12. Subscriber reports are not provided to the broadcasters or such subscriber reports are provided after a prolonged delay. The subscriber reports usually do not contain complete information, such as, package wise, city-wise, state-wise and a-la-carte basis subscriber base.

13. Subscriber reports are prone to alterations / manipulations from SMS data base, due to which subscriber base is under-declared.

14. In many instances DPOs deliberately change their SMS before an audit is to be conducted, in order to under-declare their correct subscriber base. Factually, the past data base in maintained under the old SMS and the new SMS does not capture the old data. By changing SMS, DPOs wriggle out of their Regulatory obligations in furnishing/maintaining past records /data.

15. Transaction Logs are not maintained for each subscriber of such DPO.

16. There is no way a subscriber can ascertain the details/coordinates of the DPO/LCO in its area through which it can obtain signals of the channels.

17. There is no consumer-friendly method adopted by a DPO such as call centre, toll free number, dedicated e-mail, mobile application, etc. by which a subscriber can request for obtaining signals of channels.

18. In most cases DPOs do not get a CAF executed by a customer.

19. No set process is followed for supply and installation of CPE.

20. Choice of channel to a subscriber continues to be a myth. Most of the MSOs/LCOs have still not introduced packaging on ground/ a-la-carte availability, hence channels are made available to the subscribers on a lump-sum basis, as was the practice in analogue regime.

21. When a subscriber approaches a DPO for signals of channels, most DPOs seldom inform the subscriber about the choices available to them pertaining to subscription of channels.

22. Most of the DPOs neither have a customer care call centre, nor do they have any complaint redressal centre to handle customer complaints. There is no time limit for redressal of complaints, hence, redressal of complaints by nodal officers/appellate authorities is far from reality.

23. Majority of DPOs don't even have their own websites and if they do, they are either not updated or do not carry complete information. Hence, consumers remain always uninformed.

24. There are no checks & balances between MSO & LCO in terms of complaints received from the subscribers and their redressal mechanism. No records are maintained & no periodic audits are being held for the customer complaints by any authority.

Hence, TRAI should address all the aforesaid issues while determining the scope of audit. Additionally, the scope of technical audit and subscription audit which TRAI may consider is enclosed hereto as **Annexure A**. The scope of audit suggested herein is not exhaustive and may vary from time to time depending on the changes in the regulations.

We also suggest that TRAI should make it mandatory for the DPOs to file before the TRAI any information with respect to any changes in its technical systems including SMS, CAS, Headend, STB etc. and the same may be published by TRAI on its website to enable broadcaster to access such information and decide on its requirement of conducting any further audit of such DPO. Further, TRAI should include a mandatory reporting requirement for all the DPOs who make any changes in their already audited digital addressable system. This would create system hygiene and avert various other issues/disputes which may arise thereto.

Q 2 Is there a need to have separate panel of auditors for conducting technical audit and subscription audit?

At the outset it is important to highlight that apart from technical Audit of the addressable system before provisioning of signals, there is also a need to conduct commercial audits simultaneously with the Technical audits on an on-going basis to ascertain compliance of the regulatory and contractual obligations by the DPOs.

It is submitted that technical and commercial audits are interlinked and intertwined, however it is important that auditor should have expertise of both technical and subscription audit. It is possible that the empaneled auditors may have expertise of conducting both technical and subscription audit and have experts who can simultaneously conduct both technical and subscription audits. It is also possible that certain empaneled auditors may have expertise only in technical audit or subscription audit. Hence depending upon the expertise of auditors, there may be a need to have separate panel of auditors for conducting technical audit and subscription audit. It is pertinent to mention here that while deciding the panel of auditors TRAI should consider that empaneling separate auditors for technical and subscription audit may also lead to wastage of additional time, money and resource due to repetitive audit. Further, both Technical & Subscription audits should be conducted in presence of respective broadcaster representatives who may assist auditors in identifying gaps, decencies, revenue leakages, risks, and check process controls. As a stakeholder in the complete audit process, we are concerned that if an audit is conducted behind a broadcaster's back, then auditors may not do a complete and meaningful audit and will be largely dependent on declarations made by DPOs without

any incentive to establish veracity of such declarations. In any event, it is submitted that no audit ought to be conducted behind broadcasters' back, even if such audit is to be conducted by a third-party auditor.

Similarly, while conducting audits of a new headend where there are no active subscriber data base/live customers, BECIL should issue only provisional certificates for new headend(s) and revalidate such headend again within 6 months of activation of subscriber data into the system. If the system complies with the requirement as prescribed under regulations, only then final BECIL certificate relating to compliance may be issued. We have also seen that some DPOs obtain BECIL certificates on raw/rental headends and after gaining Broadcasters content, they change their CAS/add one more CAS/ SMS systems but keep using the old BECIL certificate that no longer holds true. Even some large existing headends (BECIL certified) have integrated additional CAS/introduced new model STBs without any BECIL revalidation.

Q3 Should there be a different list of empanelment of auditors based on the model /make of CAS and SMS installed by distributor will it be feasible to operate such penal of auditor?

We understand that there are various CAS and SMS vendors whose products/services are availed by the DPOs and which have different functionality and interface. Similarly, the architecture of the network also varies based on number of SMS and CAS deployed by the DPO. Based on the expertise to deal with different type of CAS and SMS and past experience of conducting such audits forms the basis of division of list empanelment of auditors on the model/ make of CAS and SMS installed by the DPO. Before a broadcaster decides on an auditor, it should be able to check whether such auditor has evaluated CAS and SMS of makes that have been deployed by the relevant DPO. While empaneling the auditors TRAI should consider that the auditors have the expertise and experience of conducting audit of different make / model of CAS / SMS etc. In fact, the technical team of the broadcasters also have ample experience in conducting audit of various CAS and SMS having different architecture and interface.

Q 4 What should be various parameters forming eligibility criteria for seeking proposals from independent auditors (independent from service providers) for empanelment? How would it ensure that such auditors have knowledge of different CAS and SMS systems installed in Indian TV sector?

Various parameters forming eligibility criteria for seeking proposals from independent auditors are as under:

a. The auditor should have in-depth understanding of the TV distribution landscape.

b. It should have dedicated and experienced team members to undertake audit of DPO.

c. The auditor should have minimum team size (say minimum at least 20-25 members) across India so that only serious players get empaneled and they are conscious of repercussion in case they do not provide independent audit report.

d. It should have past experience of conducting DAS audits and other revenue assurance audits including audit experience in telecom sector. Depending on an auditor's experience, a broadcaster should be permitted to choose an auditor keeping in mind size of a DPO.

e. Past experience should be considered both in terms of number of years and number of audits.

f. The auditor should have ability to manage multiple engagements and handle large data.

g. The auditor should have knowledge of multiplexers, encoders, decoders, STBs and their CAS modules, SMS including different functionality and interface.

h. Team of auditors should also include IT professionals who are experts at data analysis and have sufficient knowledge of advance Excel, SQL, ORACLE or any other software on servers.

i. The team of auditors should have knowledge of channel packages, their combinations and effect of altering the packs.

j. Auditor should have knowledge of Interconnection Regulations, Tariff Orders and QoS Regulations and RIO of relevant broadcaster so as to check compliances therein.

It is submitted that representatives/technical team of broadcasters' should also participate in such audits as it has vast experience of carrying out such audit and their experience can also be utilized by the auditors in conducting the audit relating to domain knowledge, technical know-how, contractual obligations, market intelligence and better information about overall commercial deal and technical aspect of the DPOs network which are based on ground facts and figures including the past experience and audit records that are available with the broadcasters. Moreover, manner of offering to DPO and the commercial deals may vary for each Broadcaster and DPOs. Hence, auditor require such information and understanding not only about Digital addressable TV distribution landscape but also specific deals before conducting the audit. These facts and information will help the auditors in conducting the audit in transparent and effective manner.

Q 5 Should the minimum period of experience in conducting the audit be made a deciding parameter in terms of years or minimum number of audits for empanelment of auditor?

We are of the view that prior knowledge and experience in the field are of utmost importance to serve the purpose of conducting audit. The empaneled auditor must have a team of auditors who have certain minimum number experience for conducting/understanding various aspects of audit of DPO.

TRAI may also consider basic eligibility criteria for empanelment of auditors which should include professional/company accreditation by professional body / certifying authorities such as Quality Council of India, National Accreditation Board for Certification Bodies or from the International Accreditation Forum or should be registered with the Institute of Chartered Accountants of India/ Institute of Costs and Works Accountants of India having certain minimum years of experience in audit of addressable systems.

The auditor should not have any association with or any direct involvement in the design, construction, operation or maintenance of electronic equipment used in digital addressable systems of a service provider. They shall also not represent parties engaged in these activities.

Q 6 Any suggestions on type of documents in support of eligibility and experience?

At the time of seeking proposals for empanelment TRAI may consider seeking necessary documents related to experience and accreditation, proof of employment of professional staff and self-certifications from the auditor with respect to not being an interested party with respect to cable and distribution business including equipment used therein. TRAI may also consider self- declared experience letter from the auditor applying for empanelment for the purpose of eligibility and experience which can be verified by TRAI through independent agencies. TRAI ought to conduct periodic training program for the auditors to enable them to discharge their audit related duties efficiently and effectively. TRAI may also consider imposition of penalty or blacklisting of empaneled auditors in case it has been found that such auditors have made wrong declaration to TRAI with respect to its eligibility and/or experience. The list of emplaned auditors along with their experience both in terms of number of audits and number of years, along with the qualifications of audit firms including details of team members with their professional qualifications may be published by TRAI to ensure transparency and credibility of such empaneled auditors.

It is submitted that as per our past experiences, we have observed that even the best reputed audit firms do require Broadcaster's inputs while conducting both Technical & Subscription audits Hence, we are of the view that the experience and knowledge of technical team of broadcasters should also be utilized by the auditors.

Q 7 What should be the period of empanelment of auditors?

We suggest that initially the auditors may be empaneled for a period of three years. The period of empanelment of auditor may be enhanced up to five (5) years after the entire process is reviewed and updated and performance of auditors is measured. However, in the event the empaneled auditor/audit

firm is blacklisted due to wrong declaration, professional misconduct, or barred by any statutory authority/body, then they may not be re-empaneled for a minimum period of three (3) years or such greater period as may be determined the statutory authority/body which has barred such empaneled auditors/audit firms.

Q 8 What methodology to decide fee of the auditor would best suit the broadcasting sector? and Why?

We suggest that since time period for completing the audit of various DPOs vary due to size of network, number of headends, CAS and SMS etc., it would not be possible to determine the actual number of hours that would be required to conduct the audit of a DPO. Hence, it would not be justified to fix a specific amount or draw any other methodology to decide fee of auditors when such methodology may be misused. To start with, we suggest a fixed fee may be determined depending on the size of DPO (e.g., operators may be classified into three categories namely, large, medium and small sizes depending on their subscriber base and area of operation) decided on fair, reasonable and non-discriminatory basis. The basis of fixed fee should include both fixed component and variable component of audit. The fixed component should include all administrative, travel, lodging and boarding etc. Similarly, variable component of audit should be based on size on DPO as mentioned above including number of CAS/SMS deployed, locations, number of head-ends, service area etc.

Q 9 How the optimum performance of the auditors can be ensured including maximum permissible time to complete audit? Give your suggestions with justification?

Time period for completing audit of various DPOs vary due to size of network, number of headends, CAS and SMS, cooperation by DPOs, availability and extraction of data, specification of machines provided by DPOs for data analysis etc. Total timeline to complete the audit should not exceed beyond 4 weeks. It should be mandatory for auditors to submit report in a time bound manner (whether or not audit has been completed) to ensure that DPOs do not indulge in unnecessary procrastination / dilatory tactics to defeat the very purpose of audit. In such an event a negative inference may be drawn against the DPO.

Q 10: What can be the parameters to benchmark performance of the Auditor? What actions can be taken if the performance of an Auditor is below the benchmark?

TRAI may consider preparing a draft feedback form with defined parameters to benchmark performance of the Auditor which may including (a) time taken in concluding the audit (b) independence/credibility of auditors (c) work knowledge of auditor (d) issues during audit decided by the auditor etc. Such form may be filled in by both the broadcaster as well as the DPO and the

same may be filed with TRAI. This would enable TRAI to fairly evaluate work done by the empaneled auditors.

Q 11: Should there be different time period for completion of audit work for different category of the distributors? If yes what should be the time limits for different category of distributors? If no what should be that time period which is same for all categories of distributors?

Time period of completing the audit of various DPOs vary due to size of network, number of headends, CAS and SMS, cooperation by DPOs, availability and extraction of data, specification of machines provided by DPOs for data analysis etc. The maximum time in any case should not exceed beyond 4 weeks. The timeline can be matched by deploying more number of auditors to complete the audit work. It should be mandatory for auditors to submit report in a time bound manner (whether or not audit has been completed) so as to ensure that DPOs do not indulge in unnecessary procrastination / dilatory tactics to defeat the very purpose of audit. In such an event, adverse inference may be drawn against DPO.

Q 12: Are the conditions cited sufficient for de-empaneling an auditor? If not what should be the conditions for de-empaneling the auditor?

We are of the view that wrong declaration of self-certification, misuse of confidential information of DPO/ broadcasters, failure to meet eligibility condition, failure to maintain independence during audit, subletting/ assigning the work by the empaneled auditor to other auditors are some of the grounds for de-empanelment of auditors. However, delay in completion of audit may not necessitate the conditions for de-empanelment of auditors as the delay in audit may not be necessarily caused for the reasons owing to the auditors. Hence, reasons for delay needs to be further examined in detail to arrive at any conclusion. Similarly, reliability of audit is a subjective issue which also needs further deliberations. However, misstatement or wrong statement of facts and figures in the audit report or misconduct, misrepresentation etc. ought to be considered as grounds for de-empanelment of auditor. Without prejudice the foregoing, TRAI ought to ensure that sufficient protections are given to auditors to work in a fearless and independent manner and that interests of broadcasters are protected in case auditors deliberately decide to do a shoddy job.

Q 13: Comments on re-empanelment if any?

The auditor once de-empaneled due to disciplinary or other related issues during its tenure of empanelment may not be re-empaneled for a minimum period of three (3) years and such re-empanelment should be subject to fulfilment of the extant terms and conditions for empanelment of the auditors.

Q 14: Any suggestion relating to the audit framework.

We suggest that audit framework should include:

a. Reporting requirement of auditor which shall include furnishing the information relating to number of audit and compliance related issues with DPOs.
b. Blacklisting of auditor and DPO if it is found that an auditor has not conducted audit properly and/or in case systems of an operator have been found to be deficient.

<u>**Annexure A**</u>

<u>**Scope of Audit**</u>

The scope of Audit shall include the access to all the following:

I. Head End Audit

- DPO should provide Complete Network Diagram of their Head End for Audit and Auditing Purpose.
- DPO to submit & confirm the number of MUX's (Multiplexer Units) installed with active TS (Transport Stream) outputs. This should include physical audit of head end and sub headends and analysis of TS stream from the Mux.
- Number of Encryption Systems in use along with the insertion points of CAS.
- All TS from MUX should be encrypted
- DPO to ensure that his Network Watermark logo is inserted on all pay channels at encoder end only.

II. CAS Audit

DPO to provide all below information correctly;

- Make & version of CAS installed at Head End.
- CA system certificate to be provided by DPO.
- CAS version installed should not have any history of hacking, certificate from CAS vendor required.
- CAS should be able to generate log of all activities i.e. activation/deactivation/FP/OSD.
- CAS should be able to generate active/deactivate report channel wise/package wise.
- STB's & cards to be uniquely paired from DPO before distributing box down the line /LCO.
- All LCO's should be paired with unique system ID,
- DPO to declare by undertaking the no of encryptions CAS/SMS it is using at the head end and in future if it is integrating any additional CAS/SMS same should be notified to the Broadcasters by means of a fresh undertaking.
- Reconciliation of CAS database (active cards, service wise & package wise) with SMS database to be provided by DPO.
- No activation / deactivation from direct CAS system, it must be routed via SMS client only.
- It shall not be possible to alter the data and logs recorded in the CAS and the SMS.

- The DPO shall validate that the CAS, in use, do not have facility to activate and deactivate a Set Top Box (STB) directly from the CAS terminal. All activation and deactivation of STBs shall be done with the commands of the SMS.
- CA system should have the capability of providing history of all actions taken for last 2 years.
- CA system should also maintain package logs, logs pertaining to changes made in packages (e. g. -removal of channels from package or addition of channels in package) with time date stamp.

It shall be capable to generate the following reports from the logs of the CAS:

    a.   STB-VC Pairing / De-Pairing

    b.   STB Activation / De-activation

    c.   Channels Assignment to STB

    d.   Channel to package mapping along with service ID in Xml format.

    e.   Channel to package mapping along with service ID (with creation, modification and discontinuation dates)

    f.   Linkage of all SIDs (service id of channels) created in CAS with SMS and packages.

    g.   Month-end active and deactive STB and VC details.

    h.   As-on-date active and deactive STB and VC details

    i.   Ageing of deactive STB and VC details.

    j.   List of blacklisted STBs in the CAS system

III.   SMS Audit

- All product authorization must be from SMS only.
- SMS and CAS should be fully integrated.
- The SMS should be capable of:

    a.   Viewing and printing of historical data in terms of the activations and the deactivations of STBs.

    b.   Locating each and every STB and VC installed.

    c.   Generating historical data of changes in the subscriptions for each subscriber and the corresponding source of requests made by the subscriber.

- The SMS should be capable of generating reports, at any desired time about:

    a. The total number of registered subscribers.

    b. The total number of active subscribers.

    c. The total number of temporary suspended subscribers.

    d. The total number of deactivated subscribers.

    e. List of blacklisted STBs in the system.

    f. Channel and bouquet wise monthly subscription report in the prescribed format.

    g. The names of the channels forming part of each bouquet.

    h. The total number of active subscribers subscribing to a particular channel or bouquet at a given time.

    i. The name of a-la carte channel and bouquet subscribed by a subscriber.

    j. The ageing report for subscription of a particular channel or bouquet.

    k. SMS to extract & generate the following additional reports from Front end and back end;

    l. As-on-date active and deactive STB and VC details with city/state

    m. As-on-date package-wise active STB and VC details with city/state

    n. Month-end active and deactive STB and VC details with city/state

    o. Channel to package mapping along with service ID (with creation, modification and discontinue date)

    p. Broadcaster reports (past furnished reports to Broadcasters to be regenerated during audit for few sample months)

    q. Ageing of deactive subscribers with STB & VC details.

Following parameter should be validated during the audit

    i. Review Complete Network Diagram

    ii. Undertaking from Operators for all SMS and CAS installed at Head end – issue of Multiple CAS / SMS

    iii. Certificate from CAS provider for details of CA ID, Service ID, N/w ID, version and number of instances installed. Also, confirmation with respect to history of hacking

    iv. Check the number of MUX's installed with active TS outputs. Also, whether all TS from MUX are encrypted.

    v. Review whether Live diagram / fiber details of network are captured in SMS system

    vi. Confirm whether watermarking network logo for all pay channels are inserted at encoder end only

vii. Review the controls deployed to ensure integrity and reliability of the reports such as logs, access controls, with time date stamp etc.

viii. Review the Subscriber parameters which are captured in the SMS and validate if following parameters are present for subscriber

- Unique Subscriber ID
- Subscriber Contract Details – No, Term, Date, Name, Address & contact details
- Hardware details, city, state

ix. Review the subscribers activation/ de-activation history in the SMS system

x. Validate if the SMS is integrated with the Conditional Access ("CA") system.

xi. Review if all the active and de-active STBs are synchronized in both SMS and CA system.

xii. Validate if independent logs/report can be generation for active and de-active VCs with the product/channels active in both SMS & CA systems.

xiii. Review if the system supports the Finger Printing and scroll features at Box level, Customer account level as well as Global level.

xiv. Validate if all the STBs are individually addressable from the System and are paired with the viewing cards.

xv. Validate if the LCO is attached to a Subscriber

xvi. Review the Electronic Programming Guide to check LCN/CDN and genre of all Channels

xvii. Review the various packages programmed in the Systems with respect to the subscriber reports submitted to the Broadcasters/ Aggregators.

xviii. Extraction and Examination of System Generated reports, statistics, data bases, etc. pertaining to the various packages, schemes, channel availability, bouquet composition, rates,

xix. Review of the following reports are supported by SMS & CA System.

    a. Total no of Subscribers – active & de-active separately
    b. De-active subscribers with ageing
    c. Channel wise Subscribers - total
    d. Channel wise Subscribers – split by package
    e. Revenue by Package / Channel
    f. Subscriber/Revenue Reports by State/City
    g. No of packages/services offered
    h. List of Channels / rates of each package
    i. Rate Card Options offered / Attached with active Subscribers
    j. Historical data reports
    k. Free / demo Subscribers details
    l. Exception cases – active only in SMS or CA system

V. STB Audit

- All STB should be individually paired in advance with unique smart card at central warehouse of DPO before handing over to LCO (DACS/non DACS area) or down the line distribution.

- DPO to provide details of manufacturers of STB's being used / to be used by him. All STBs must be secure chipset with chipset pairing mandatory.

- DPO should provide one set of all type/model of boxes for simulation testing

- ECM/EMM base Forced messaging scroll mode should be available.

- All the STBs should have embedded Conditional Access.

- The STB should be capable of supporting Finger printing. The STB should support both Entitlement Control Message (ECM) & Entitlement Management Message (EMM) based fingerprinting.

- The STB should be individually addressable from the Head end.

- The messaging character length should be minimum of 120 characters.

- There should be provision for the global messaging, group messaging and the individual STB messaging.

- The STB should have forced messaging capability including forced finger Printing display.

- The STB must be BIS compliant.

- The STBs should be addressable over the air to facilitate Over The Air (OTA) software upgrade.

- The STB with facilities for recording the programs shall have a copy protection system

- DVR / PVR STB should be compliance of following;

- Content should get recorded along with FP/watermarking/OSD & also should display live FP during play out.

- Recorded content should be encrypted & not play on any other devices.

- Content should get record along with entitlements and play out only if current entitlement of that channel is active.

- User should not have access to install third party application/software.

- Please describe if the Set Top Box support any type of interactive middleware.

VI Distribution Network Audit

- DPO should provide below information in detail;
  (i) Service area(s).

- Auditor to visit to 3-4 sample cities/LCOs to ascertain whether any additional CAS/SMS is added on the ground but not reflecting at H/E (under declaration) or services are run in unencrypted mode at LCOs end.

VII. Audit relating to Anti-Piracy Measure

1. DPO shall ensure that it has systems, processes and controls in place to run finger printing at regular intervals.
2. The STB should support both visible and covert types of finger printing.
3. The finger printing should not be removable by pressing any key on the remote of STB.
4. The finger printing should be on the top most layer of the video.
5. The finger printing should be such that it can identify the unique STB number or the unique VC number.
6. The finger printing should appear on the screens in all scenarios, such as menu, Electronic Programme Guide (EPG), Settings, blank screen, and games etc.
7. The location, font colour and background colour of fingerprint should be changeable from head end and should be random on the viewing device.
8. The finger printing should be able to give the numbers of characters as to identify the unique STB and/or the VC.
9. The finger printing should be possible on global as well as on the individual STB basis.
10. The overt finger printing should be displayed by DPO without any alteration with regard to the time, location, duration and frequency.
11. Scroll messaging should be only available in the lower part of the screen.
12. The STB should have a provision that finger printing is never disabled.
13. The watermarking network logo for all pay channels shall be inserted at encoder end only.

VIII. Subscription Audit

1. Provide system generated Channel-wise and Subscriber Package -wise reports of channels from the System in a non-editable format.
2. Understand/ Verify the Customer Life Cycle Management process by performing a walkthrough of the following processes and their underlying systems
   (i) Customer acquisition
   (ii) Provisioning of the Subscriber in authentication, billing and SMS system
   (iii) Subscriber Package change request process
   (iv) Customer Retention process, if any
   (v) Deactivation and churn process

3. Understand/ Verify the various Subscriber Package being offered to customers
   (i) Obtain details of all approved Subscriber Package and add on which are being offered to customers
   (ii) Interactions with Affiliate's marketing and sales team on how the various channels are being marketed
   (iii)Any special marketing schemes or promotions
   (iv)Confirm if the marketing and promotional deals offered to customers by Broadcaster are being passed on by DPO
   (v) Details of the consumers subscribing to the various Bouquets / Subscriber Package, including 'demo'/ free/ complimentary/ testing/ promotional subscribers

4. Understand the declaration report generation process by performing a walkthrough of processes and underlying systems (to understand completeness and accuracy of subscriber report generation process):
   (i) Generation of reports for subscriber declaration for Channels or Subscriber Package
   (ii) Any reconciliations / checks /adjustments carried out before sending the declarations

5. Analyze declaration reports on a sample basis:
   (i) Reconciling the declaration figures with base data from various systems (SMS/Provisioning/Billing and Authentication systems)
   (ii) Analyse the computation of average subscribers
   (iii)Ascertain the average subscribers for a specific period on a sample basis by generating a sample report for a given period in the presence of the authorised representative/auditors

6. Analysis of the following: -
   - Input and change controls of customer data into SMS
   - SMS user access controls – authentication, authorization and logging
   - Analyse system logs to identify any significant changes or trail of changes made
   - Security controls over key databases and systems including not limiting to SMS, Provisioning, authentication and billing systems
   - Review the system logic for the reports which are inputs to Broadcaster declarations
   - Channel allocation/fixation to a particular LCN
   - Mapping of subscriber id across the CRM and SMS billing system if the same is different across the systems
   - Sample of activation and deactivation request logs
   - Opening and closing subscribers for sample months (report to be taken in front of the auditors/ rep)

- Confirmation of the numbers in the middle of the month on random chosen dates (report to be taken in front of the auditors/ authorised representatives of both parties)
- Live Demo of the queries being put in to the system to generate different reports.
- List of CAS and SMS used by DPO at various locations. In case more than one CAS and SMS system is used by DPO, then understand integration process controlled, reported and invoiced
- In case of multiple CAS being used by DPO, to understand synchronization between multiple CAS and SMS.

IX Audit to Validate the following compliance relating to the Interconnection Regulations, Tariff Order and the QoS Regulations;

S. No.	Area	Details
1	Interconnection Regulations	Maintain website for publishing RIO + channel capacity
2		Show genres of the channels as per regulatory requirement and assign a unique channel number for each television channel available on its network
3		MSO/LCO revenue settlement mechanism, proper invoicing and accounting
4		Valid MIA / SIA between MSO and LCO
5		Web based grievance redressal mechanism for addressing the complaints of LCOs and designate a compliance officer
6		declare coverage area of each distribution network as a target market, total channel carrying capacity, list of channels available on the network, spare channel capacity available on the network
7		Maintain list of channels, in chronological order, for which requests have been received from broadcasters for distribution of their channels
8	Tariff Order	Declare network capacity fee payable by a subscriber and shall not increase the same for a period of six months.
9		Provide all channels available in its network on a-la-carte and all bouquet of channels offered by broadcaster for which the DPO has signed interconnection agreement with the broadcaster.
10		Offer basic service tier package
11		List of channels available on a-la-carte basis along with rate and the bouquets of channels available along with the rate.

12	Quality of	Customer care channel should be operational
13	Service	Maintenance of website by DPOs - consumer corner + login
14		MRP to be shown on EPG
15		Facility to send SMS on customer registered mobile
16		CAF details updated in SMS
17		Functional billing system with electronic acknowledgement
18		Customer care and complaint redressal - toll free no + web based complaint management + Nodal Officer details Customer care programming service with a unique number assigned to it
19		Maintain technical standards of the signals as per the relevant standards laid down by Digital Video Broadcasting (DVB)/European Telecommunication Standards Institute (ETSI) /International Electro-Technical Commission(IEC)/Indian Standard
20		Not to discontinue any channel or change composition of bouquet without giving the prescribed notice in the prescribed format.