

**Last Date of Submission of Bid
By 03.00PM on 8th June 2015**

TELECOM REGULATORY AUTHORITY OF INDIA

**MahanagarDoorsancharBhawan,
Jawaharlal Nehru Marg (Old Minto Road),
New Delhi – 110 002**

TENDER DOCUMENT FOR AUDIT

Audit & Assessment of Quality of Service

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TENDER DOCUMENT FOR AUDIT

Invitation of Bids for Audit & Assessment of Quality of Service

Notice Inviting Tender

1. The Telecom Regulatory Authority of India, Mahanagar Doorsanchar Bhawan, Jawaharlal Nehru Marg (Old Minto Road), New Delhi – 110002 (hereinafter referred to as TRAI) invites sealed tender from companies/ firms (hereinafter referred to as audit agency), who satisfy the following eligibility conditions, for conducting audit and assessment of quality of service provided by service providers, in terms of the benchmarks specified in the “Standards of Quality of Service of Basic Telephone Service (Wire line) and Cellular Mobile Telephone Service Regulations, 2009 (7 of 2009) dated 20th March, 2009, the “Standards of Quality of Service for Wireless Data Services Regulations, 2012 dated 4th December 2012, and the “Quality of Service of Broadband Service Regulations”, 2006 (11 of 2006) dated 6th October, 2006 on zonal basis (East zone, West Zone, North Zone and South Zone), namely:-

(i) the audit agency should have a turnover of not less than rupees one crore during the financial year 2014-15 and should have a minimum cumulative turnover of rupees three crores in the last three consecutive financial years;

(ii) the audit agency should have similar experience of at least two years in conducting audit /assessment of Quality of Service and should have sufficient staff and infrastructure to carry out the audit and assessment of Quality of Service as per the Terms of Reference; and

2. (i) The Zones shall comprise of the following Telecom Circles/Metro Service Areas:

North Zone: Delhi, Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Rajasthan, Uttar Pradesh-East and Uttar Pradesh-West (including Uttarakhand). For the cellular mobile telephone service the service area of Delhi includes Ghaziabad, Faridabad, Noida and Gurgaon.

South Zone: Chennai, Andhra Pradesh (including Telangana), Karnataka, Tamilnadu (excluding Chennai) and Kerala.

West Zone: Mumbai, Maharashtra (including Goa and excluding Mumbai), Gujarat and Madhya Pradesh (including Chhattisgarh).

East Zone: Kolkata, West Bengal (including Andaman & Nicobar, Sikkim and excluding Kolkata), Bihar (including Jharkhand), Orissa, Assam and North East which includes Arunachal Pradesh, Meghalaya, Mizoram, Nagaland, Manipur and Tripura.

(ii) Details of the areas covered under each Telecom Circle/ Metro Service Area are given in the tender document:

3. A copy of the Tender Document is available on TRAI's website www.trai.gov.in and may be downloaded for submission. **The audit agencies shall submit technical as well as financial bids each in separate sealed covers.** The bidder shall submit, for both technical and financial bid, one set marked as 'Original Bid' along with 4 copies of the same marking as 'Copy No.1, Copy No.2, Copy No.3, Copy No.4'. In the event of any discrepancy between the copies, the Original bid shall be treated as authentic notwithstanding the discrepancy in other copies. Each page of the tender document and clarifications/corrigendum issued, if any, is to be signed in token of the companies/firms having read and accepted the terms and conditions. The name, address, Fax number, telephone/mobile number and e-mail of the bidder should clearly appear on the envelope. The tender number and date of tender opening should also appear on the envelope. Any corrections or overwriting in the technical and financial bid should be attested by the person signing the bid. Any bid with corrections or overwriting without such attestation shall not be considered.

4. An audit agency may submit bids for one or more Zones, the bid for each zone shall be submitted in separate sealed covers. The bids in separate sealed covers for each Zone must be accompanied by earnest money of Rs.3, 00,000/- (Rupees three lakhs only), as per the details given in clause 3 of the section-I of the tender document.

5. The bid, complete in all respects, shall be submitted, not later than 3.00 PM on the **8th June 2015**, to Joint Advisor (QoS), Telecom Regulatory Authority of India, Room No.708, 7th Floor, Mahanagar Doorsanchar Bhawan, Jawaharlal Nehru Marg (Old Minto Road), New Delhi-110 002. The technical proposals will be opened at **3.30PM on 8th June 2015**. The bidders, if they so desire, may be present at the time of opening of the bids. A pre-tender conference will be held with the prospective bidders on **20th May 2015 at 3.00 PM** in the Conference Hall of TRAI on 3rd Floor, Mahanagar Doorsanchar Bhawan Jawaharlal Nehru Marg (Old Minto Road), New Delhi-110002. The prospective audit agency may, on their own, attend the said conference without waiting for any further communication.

6. **Unsealed bids or bids without the earnest money deposit shall be summarily rejected.**

7. **Late Bids:** The bids received, either by post or in person, after the due date and time of submission of bids shall be summarily rejected and will be returned unopened.

8. The audit agencies may be required to give a presentation on the technical aspects and their ability to perform the work for which date will be advised separately

(Thomas Varghese)
Joint Advisor (QOS)

SECTION- I

TENDER CONDITIONS AND INSTRUCTIONS TO BIDDERS

1. Background

1.1 The Telecom Regulatory Authority of India has, vide its regulations “the Standards of Quality of Service of Basic Telephone Service (Wire line) and Cellular Mobile Telephone Service, Regulations, 2009” (7 of 2009) dated the 20th March, 2009, published in the Gazette of India, Extraordinary Part-III-Section 4 dated the 23rd March, 2009 laid down the Quality of Service parameters applicable to the basic telephone service (wire line) and cellular mobile telephone service. A copy of the said regulations is available on the website of TRAI (www.trai.gov.in). These regulations are applicable to all the Basic Telephone Service Providers/ Unified Access Service Providers and Cellular Mobile Telephone Service Providers, including BSNL and MTNL. Regulations 3 and 4 of these regulations provide Quality of Service (QoS) parameters pertaining to Basic Telephone Service and regulations 5 and 6 provide for QoS parameters pertaining to Cellular Mobile Telephone Service.

1.2 The Telecom Regulatory Authority of India has vide its regulations “Quality of Service for Broadband Service Regulations, 2006” dated the 6th Oct. 2006 (11 of 2006) published in the Gazette of India Extraordinary Part-III-Section 4 dated the 6th Oct, 2006, laid down the Quality of service parameters applicable to the broadband services. A copy of the said regulations is available on the website of TRAI www.trai.gov.in. These regulations are applicable to all the Internet Service Providers, Basic Telephone Service Providers and Unified Access Service Providers providing broadband services. S. No. (i) to (viii) of regulation 3 of these regulations provide for QoS parameters, other than the parameters relating to customer perception of service, to be achieved by service providers.

1.3 The Telecom Regulatory Authority of India has vide its regulations the “Standards of Quality of Service for Wireless Data Services Regulations, 2012” (26 of 2012) dated 4th December 2012 laid down the quality of Service parameters applicable to the wireless data services. A copy of the said regulations is available on the website of TRAI (www.trai.gov.in). These regulations are applicable to all the cellular mobile telecom service providers providing data services. S. No. 3.1 to 3.8 of regulation 3 of these regulations provides for QoS parameters to be achieved by service providers.

2. Clarification on tender document and pre-tender conference

2.1 A prospective bidder, requiring any clarification on the tender document, may submit in writing the request for any clarification not **later than 4.00 PM of 18st May 2015 to Joint Advisor (QoS)**, Telecom Regulatory Authority of India, 7th Floor, Mahanagar Door Sanchar Bhawan, Jawaharlal Nehru Marg (Old Minto Road), New Delhi-110002 (FAX No.011-23213036). Copy of the queries (without identifying the

source) and clarifications by TRAI will be uploaded on the website of TRAI (www.traigov.in).

2.2 Any clarification issued by TRAI in response to any query raised by prospective bidders shall form an integral part of tender document and it may amount to an amendment of relevant clauses of the tender document.

2.3 The bidders are required to keep a watch on the Website of TRAI (www.traigov.in) for any amendment to the tender document or for clarifications in response to the queries raised by the bidders up to a day prior to the last date for submission of bids. TRAI reserves the right to reject any bids if the bids are submitted without taking into account these amendments/clarifications. Further, the prospective bidders shall be fully responsible for downloading of the amendments, if any, made in the tender document and clarifications, if any, issued by TRAI and TRAI accepts no responsibility whatsoever in this regard.

2.4 The request for clarification received as per Para 2.1 above shall be, to the extent possible, clarified in the pre-tender conference. The pre-tender conference will be held with the prospective audit agencies, for technical discussion/clarifications on technical and other matters regarding terms and conditions of the tender document. This conference will be held on **20th May 2015 at 3.00 PM** in the Conference Room of TRAI located on the 3rd Floor, Mahanagar Doorsanchar Bhawan, New Delhi-110002. As a result of the discussion in this pre-tender conference, if any modifications to the tender document are considered necessary, suitable corrigenda/addenda to the tender document will be issued. A copy of such corrigenda/addenda will be uploaded on TRAI website. The prospective audit agencies should, on their own, attend the said conference without waiting for any further communication.

3. Earnest Money Deposit (EMD)

3.1 The prospective audit agency shall submit along with their bid a bank draft for a sum of **Rs.3,00,000 (Rupees Three Lakhs only)** drawn on any scheduled bank in favour of "TRAJ" payable at Delhi as earnest money for each Zone separately. Any bid not accompanied by earnest money shall be summarily rejected. **The EMD shall be submitted with the Technical Bid.** No interest shall be payable on the EMD submitted with TRAI. The earnest money will be refunded to the unsuccessful bidders after finalisation of the tender. The EMD will be returned to the successful bidder after signing of the agreement and furnishing of performance bank guarantee.

3.2 The EMD may be forfeited in any of the following circumstances:

- (a) If the bidder withdraws his bid during the period of validity of bids.
- (b) In the case of successful bidder, if the bidder fails:
 - (i) to sign the agreement; or
 - (ii) to furnish Performance Bank Guarantee in accordance to Clause 9 of this Section.

4. Eligibility

4.1 The audit agency that satisfying the following conditions is eligible for bidding, namely:

- (i) The audit agency should have a turnover of not less than rupees one crore during the financial year 2014-15 and should have a minimum cumulative turnover of rupees three crores in the last three consecutive financial years.
- (ii) The audit agency should have experience of at least two years in conducting audit /assessment of Quality of Service and should have sufficient staff and infrastructure to carry out the audit and assessment of Quality of Service as per the Terms of Reference. The agency shall earmark at least one staff member for each Service area exclusively for this project. The agency shall not change the officials concerned during the project period, without the prior approval of TRAI.

4.2 The audit agency shall submit documentary evidence regarding fulfilment of the above eligibility conditions including the income tax returns for the last three consecutive years and a copy of PAN.

5. Terms of Reference

The Terms of Reference for audit and assessment of Quality of Service provided by service providers are provided in **Section-II**.

6. Schedule for financial bids

Schedule for financial bids is available at **Section-III**. The quotation shall include all levies, duties and taxes including service tax.

7. Technical proposal

Standard formats for technical proposal are given at **Section-IV**. All the necessary details are required to be filled by the bidders and submitted before the last date and time of submission. The Bidder shall sign a Pre Contract Integrity pact as per Form given in the Annexure 5 and submit the same along with Technical bid.

8. Last date for submission of bids

The bid should be submitted not later than **03.00 PM** on **8th June 2015**. Any bid received after this specified date shall be rejected and returned unopened to the bidder.

9. Performance Bank Guarantee bond

9.1 The selected audit agency shall furnish a Performance Bank Guarantee in the Proforma given at **Annexure-1** from any scheduled Bank in India within 15 (fifteen) days from the date of receipt of the letter of acceptance by the audit agency for an amount equivalent to 10% (ten per cent) of the value of the contract before signing of the agreement. In case the furnishing of an acceptable Performance Bank Guarantee is delayed by the audit agency beyond the afore-mentioned period, TRAI may cancel the said letter of acceptance and forfeit the Earnest Money Deposit (EMD) submitted by the audit agency. Initially, the bank guarantee shall be valid for a period of one year and six months. The Audit agency on its own shall extend the validity period of the bank guarantee on similar terms at least one month prior to the day of its expiry without any demand or notice from TRAI. The bank guarantees shall be kept valid for an extended period of six months beyond the period of agreement. Any failure to do so, shall amount to violation of the terms of the agreement and entitle the TRAI to encash the bank guarantee and to convert it into a cash security without any reference to the Audit agency at its risk and cost. No interest or compensation whatsoever shall be payable by TRAI on such encashment. On satisfactory completion of the contract in all respects, as per the terms and conditions specified in the tender document and contract agreement, the Performance Bank Guarantee shall be returned to the audit agency. No interest in any form shall be payable by TRAI to the audit agency before or after expiry of the Performance Bank Guarantee

9.2 In case the agreement is extended to cover audit & assessment work for one more year, the audit agency shall submit, within 15 (fifteen) days of intimation about such extension by TRAI, a fresh Performance Bank Guarantee for amount equivalent to 10% (ten per cent) of the value of the contract for the extended period or extended work, as the case may be, in similar manner and shall also extend by one year, the validity of such performance bank guarantee, one month before its expiry in the same manner as indicated in clause 9.1 above.

9.3 Without prejudice to its rights to terminate the agreement and to pursue any other remedy available to it under the law, TRAI may forfeit full or part of the Performance Bank Guarantee in case –

- (i) the audit agency fails to carry out the assigned task as per the terms and conditions specified in the tender document and agreement; or
- (ii) the report is not as per the format approved by TRAI; or
- (iii) the report contains information, which is found to be factually incorrect or materially wrong by TRAI.

10. TRAI's right to accept or reject a bid without assigning any reason

TRAI reserves the right to accept or reject any bid without assigning any reason.

11. Opening and evaluation of the bid

11.1 The bids shall be evaluated by the Tender Evaluation Committee based on both techno-commercial and financial aspects as stipulated in this tender document.

11.2 The technical bids will be technically evaluated giving due consideration to the audit agency's conformity with the tender conditions, its capability to perform the assignment, past experience in carrying out works of similar nature, profile of personnel to be engaged for this assignment and financial capability. The audit agencies may be called to make presentation to the tender evaluation committee constituted for this purpose. They shall furnish the clarifications/detailed explanations on the technical proposals, if sought by TRAI or by the tender evaluation committee.

11.3 The financial bids of only those bidders, who qualify in the evaluation of the technical bids, will be opened and evaluated giving due consideration to the total quoted price on Zonal basis i.e. as a package covering all three services viz Basic Telephone Service (Wire line), Cellular Mobile Telephone Service and Broadband service in all service areas/circles in respective Zone. Total quoted price for a zone only will be taken for ranking of bids from lowest quoted to highest quoted. Arithmetical errors shall be rectified on the following basis:-

“If there is a discrepancy between words and figures, the amount in words shall prevail. If there is discrepancy in the total arrived at and the rates quoted for each service area of a zone, the total shall be corrected taking into account the rates quoted for the service areas within the zone. If the bidder does not accept the correction of the errors, his bid shall be rejected”.

11.4 In situations where lowest quoted rates (L1) of two or more bidders for a Zone are same, in such cases fresh round of financial bidding from such bidders shall be called. The lowest valid offer shall be declared successful.

11.5 TRAI reserves the right to award the audit work for any service area/ circle in the tendered Zone to any other audit agency or organization at its discretion and the successful bidder for the Zone shall have no objection to the awarding of such audit work in respect of such service area/ circle to such audit agency or organization on the ground that such audit agency or organization has not participated in the tender process and to the corresponding reduction in the total bid amount quoted by the successful bidder for the entire Zone.

12. Validity of Contract

The agreement for undertaking audit and assessment of Quality of Service shall be valid for a period of 18 (eighteen) months from the date of signing of the agreement, covering audit and assessment of Quality of Service for one year covering four quarters as specified in the tender. The quarter is defined as a period of three continuous calendar months ending 31st March, 30th June, 30th September and 31st December. The contract

period may be extended for one more year at the same rate and terms & conditions as per the agreement, at the sole discretion of TRAI, to cover the audit and assessment of Quality of Service in the next year.

13. Force Majeure

13.1 If the performance in full or part as specified in the agreement is prevented, restricted, delayed or interfered by reasons of-

- i) fire, explosion, cyclone, floods;
- ii) war, revolution, acts of public enemies, blockage, or embargo;
- iii) any law, order, proclamation, ordinance, demand or requirements of any Government, or authority or representative of any Government;
- iv) strikes, shut-downs or labour disputes which are not instigated for the purpose of avoiding obligations herein; or
- v) any other circumstances beyond the control of the party affected;

then, notwithstanding anything contained hereinbefore, the party affected may be excused from its performance to the extent such performance relates to such prevention, restriction, delay or interference, provided the party so affected uses its best efforts to remove such cause of non-performance, and when removed, the party shall continue performance with utmost urgency.

13.2 If at any time during the performance of the contract, the audit agency should encounter condition impeding timely completion of the work, the audit agency shall promptly notify to the TRAI in writing the fact of the delay, its likely duration and its causes. As soon as practicable after receipt of the notice of audit agency, TRAI may evaluate the situation and may at its discretion extend the period for performance of the contract after mutual discussion with the audit agency.

14. Termination:

14.1 TRAI reserves the right to terminate the agreement (i) if the audit agency fails to carry out the work as per the terms and conditions in the tender documents/agreement or (ii) if the reports are delayed or (iii) if the reports are materially incorrect. The decision of TRAI as regards such material incorrectness of the report shall be final and binding on the audit agency.

14.2 Delivery of the performance of the work shall be made by the audit agency in accordance with the time schedule specified by TRAI. In case the work is not completed within the stipulated delivery period, as indicated in the agreement, TRAI reserves the right to foreclose/terminate the agreement and/or impose a penalty as per clause 17. The termination/foreclosing of the agreement shall be at the risk and

responsibility of the audit agency and TRAI reserves the right to get the work completed for the remaining part at the risk and cost of the defaulting audit agency.

15. Indemnity

In no event shall TRAI be liable to audit agency for special, direct, indirect or any other damages in connection with or arising out of the performance or use of services provided by the audit agency under this agreement. The audit agency shall indemnify TRAI in respect of any damages, claim, loss or action against TRAI for act of commission or omission on the part of the audit agency, its agents or servants.

16. Coordination

16.1 The audit agency shall appoint one of its employees as coordinator who shall represent the audit agency in all dealings with TRAI.

16.2 All correspondence relating to the tender shall be addressed to Joint Advisor (QOS), Telecom Regulatory Authority of India, Mahanagar Doorsanchar Bhawan, New Delhi-110 002.

17. Payment terms:

17.1 Payment shall be made after completion of audit and assessment of quality of service and submission of the reports as per the following schedule and after TRAI is satisfied that the report submitted by the audit agency complies with the formats, norms and quality specified in the agreement:-

Sl. No.	Schedule	% payment in terms of total payment for one year
1.	Submission of all final reporting formats by the audit agency for audit and assessment of quality of service incorporating modifications /corrections suggested by TRAI and its acceptance	Ten percent (10%)of the total contract price.
2.	Submission of the audit and assessment of Quality of Service reports conducted during the first quarter for the specified service areas in all the zones for basic telephone service (wireline), cellular mobile telephone service and broadband service and acceptance of the report by TRAI	Ninety percent(90%) of the contract price for each of the service areas covered for basic telephone service and broadband service; and Twenty Two and Half percent(22.50%) of the contract price for each of the service areas covered for cellular mobile telephone service
3.	Submission of the audit and assessment of Quality of Service reports conducted during the second quarter for the specified	Ninety percent(90%) of the contract price for each of the service areas covered for basic telephone service and broadband

	service areas in all the zones for basic telephone service (wireline), cellular mobile telephone service and broadband service and acceptance of the report by TRAI	service; and Twenty Two and Half percent(22.50%) of the contract price for each of the service areas covered for cellular mobile telephone service
4	Submission of the audit and assessment of Quality of Service reports conducted during the third quarter for the specified service areas in all the zones for basic telephone service (wire line), cellular mobile telephone service and broadband service and acceptance of the report by TRAI	Ninety percent(90%) of the contract price for each of the service areas covered for basic telephone service and broadband service; and Twenty Two and Half percent(22.50%) of the contract price for each of the service areas covered for cellular mobile telephone service
5.	Submission of the audit and assessment of Quality of Service reports conducted during the fourth quarter for the specified service areas in all the zones for basic telephone service (wire line), cellular mobile telephone service and broadband service and acceptance of the report by TRAI	Ninety percent(90%) of the contract price for each of the service areas covered for basic telephone service and broadband service; and Twenty Two and Half percent(22.50%) of the contract price for each of the service areas covered for cellular mobile telephone service

17.2 In case the validity of the agreement is extended for one more year, in accordance with clause 12 hereinbefore, payment for the extended period will be made as follows:

Sl. No.	Schedule	% payment in terms of total payment for one year
1.	Submission of the audit and assessment of Quality of Service reports conducted during the first quarter for the specified service areas in all the zones for basic telephone service (wire line), cellular mobile telephone service and broadband service and acceptance of the report by TRAI	Hundred percent(100%) of the contract price for each of the service areas covered for basic telephone service and broadband service; and Twenty Five percent(25%) of the contract price for each of the service areas covered for cellular mobile telephone service
2.	Submission of the audit and assessment of Quality of Service reports conducted during the second quarter for the specified service areas in all the zones for basic telephone service (wire line), cellular mobile telephone service and broadband service and acceptance of the report by TRAI	Hundred percent(100%) of the contract price for each of the service areas covered for basic telephone service and broadband service; and Twenty Five percent(25%) of the contract price for each of the service areas covered for cellular mobile telephone service
3.	Submission of the audit and assessment of Quality of Service reports conducted during the	Hundred percent(100%) of the contract price for each of the service areas covered for basic

	third quarter for the specified service areas in all the zones for basic telephone service (wire line), cellular mobile telephone service and broadband service and acceptance of the report by TRAI	telephone service and broadband service; and Twenty Five percent(25%) of the contract price for each of the service areas covered for cellular mobile telephone service
4	Submission of the audit and assessment of Quality of Service reports conducted during the fourth quarter for the specified service areas in all the zones for basic telephone service (wire line), cellular mobile telephone service and broadband service and acceptance of the report by TRAI	Hundred percent(100%) of the contract price for each of the service areas covered for basic telephone service and broadband service; and Twenty Five percent(25%) of the contract price for each of the service areas covered for cellular mobile telephone service

17.3 The audit work shall be completed and all the reports shall be submitted within the respective time limits as specified in the tender or agreement. ***In respect of Cellular Mobile Telephone service, all the license service areas/Circles shall be audited in every quarter of the year i.e. a service area will be audited four times in a year. However, in respect of Basic telephone service (wire line) and Broadband service, a service area/Circle shall be audited only once in a year.*** The reports of audit and assessment of Basic (wire line) and Broadband services are to be submitted on quarterly basis along with the Cellular Mobile Telephone Service audit reports as specified in Para 5.4 of TOR. No extension of time for completion of the audit and assessment work and for submission of the report thereof shall be given, except for situation arising out of force majeure events specified under clause 13 of the Tender Document.

Penalty:

17.4 In case the ***quarterly*** consolidated reports of the audit and assessment of Quality of Service is delayed, a penalty shall be levied by TRAI at the rate of –

- (a) 5% (five per cent) of the value of ***quarterly*** contracted work for audit and assessment of Quality of Service, for the first week of delay;
- (b) 5% (five per cent) of the value of ***quarterly*** contracted work for audit and assessment of Quality of Service, for the second week of delay;
- (c) 40% (forty per cent) of the value of ***quarterly*** contracted work for audit and assessment of Quality of Service, for delay beyond two weeks and up to four weeks;

which shall be deducted from the amount payable to the Audit agency by TRAI. In case the ***quarterly*** consolidated report for audit and assessment of Quality of Service is delayed beyond four weeks, the report shall not be accepted and no payment shall be made by TRAI for such delayed report submitted after four weeks of due date for submission of the report.

17.5 In case the audit report is found by TRAI to be materially or factually incorrect or is not as per the format of report approved by TRAI, the report shall be liable to be rejected and no payment shall be made for such contracted work if rejected by TRAI and TRAI may also forfeit and encash the Performance Bank Guarantee. The decision of TRAI as regards such material or factual incorrectness of the report shall be final and binding on the audit agency.

17.6 Without prejudice to the provisions contained in Clause 17.5, in any specific case where the report submitted by the Audit agency for any **quarterly** period is found by TRAI to be incomplete in respect of any of the parameters specified in the format of the report approved by TRAI or the extent of work as carried out by the audit agency falls short of the prescribed quantum and the parameters or the quantum of work so left incomplete does not exceed ten per cent of the total parameters or quantum of work, as the case may be, laid down for all Service Areas in the Zone which are covered in the **quarterly** period and the non-completion of such parameters/quantum of work does not impact the report in general and it is possible to make comparison of performance of all the service providers in the respective Service Area for various parameters of quality of service covered under the assignment, or where such comparison of performance of all the service providers is impacted by such incompleteness of the work/report in only one service area, TRAI may, at its discretion, accept such a report:

Provided that the payment for such incomplete report shall be reduced by-

- (a) ten percent of the total amount payable for the Service Areas which are covered in that **quarterly** period to which such report pertains, if the report does not impact the comparison of performance of the service providers in all service areas covered in the **quarterly** period;
- (b) a sum equivalent to the proportionate value of the quarterly payment attributable to the particular Service Area, in case if the deficiency or incompleteness of any parameters or quantum of work in such report impacts the report itself and it is not possible to make a comparison of the performance of all the service providers in that Service Area.

Provided further that in case such deficiency as referred to in clause (b) of the first proviso is noticed in the report for more than one Service Area or the incomplete portion of the audit work is more than ten percent in the service areas covered in the **quarterly** period, such report shall not be accepted by TRAI and no payment whatsoever will be made for the entire **quarterly** report and such non-payment for the **quarterly** report shall be without prejudice to the rights of TRAI to foreclose or cancel the agreement and that such foreclosure or cancellation of the contract shall be at the risk and responsibility of the audit agency and that TRAI shall be free to get the work completed for the remaining part of the contract at

the risk and cost of the audit agency. The Performance Bank Guarantee of the audit agency may also be forfeited in such cases.

Provided also that the decision of TRAI as regards the acceptability of such **quarterly** reports and the quantum of payment for such **quarterly** report shall be final and binding on the audit agency.

18. Confidentiality

- 18.1 The bidder shall treat all the information provided by TRAI as confidential and shall not share this information without the written permission of TRAI. The reports, data, etc. submitted by the bidder shall be the exclusive property of TRAI and the bidder shall not disclose the contents of such reports, data, results, etc. to any third party without the written consent of TRAI. This condition shall survive the termination of the contract with the bidder.
- 18.2 All information gathered during the audit and assessment of Quality of Service and reports shall be the sole property of TRAI. The audit agency shall not transfer / pass on the information of one service provider to another service provider or to any third party under any circumstances.
- 18.3 The Bidder shall not publish, disclose any information, make available or otherwise dispose of the document /data / software or any part or parts thereof to any third party, directly or indirectly without prior written consent of TRAI.
- 18.4 The bidder shall restrict access to the documents / data / software only to those of their employees to whom it will be felt necessary and relevant for this project and shall draw the provision of this undertaking to the personal attention of those of its employees to whom access to the document/data/software will be granted.
- 18.5 The bidder shall bear all costs associated with the preparation and submission of the bid. The Authority will, in no case, be responsible or liable for these costs, regardless of the conduct or outcome of the bidding

19. Laws governing contract

The laws of India for the time being in force shall govern the agreement.

20. Jurisdiction of courts

The courts of law located at New Delhi/Delhi shall alone have the jurisdiction to decide any dispute arising out of or in respect of the agreement entered into pursuant to this tender.

21. Arbitration

In the event of any dispute arising between TRAI and the audit agency, the matter shall be referred to the Secretary, TRAI who may himself act as sole arbitrator or may name as sole arbitrator an officer of TRAI notwithstanding the fact that such officer has been directly or indirectly associated with the tender process or the contract between the parties. The audit agency shall not be entitled to raise any objection to the appointment of such officer of TRAI as the sole arbitrator. The award of the arbitrator shall be final and binding on both the parties, subject to the provisions of the Arbitration and Conciliation Act, 1996 and rules made there under for the time being in force. The parties expressly agree that the arbitration proceedings shall be held at New Delhi. The language of arbitration shall be English.

22. Language of the bid:

The bid shall be submitted in English language.

23. Currency for the financial bid:

The financial bid shall be quoted in Indian Rupees (INR). The bid shall be inclusive of all taxes, levies and duties including service tax etc. Any change in the prevailing tax structure or imposition of any new tax by the competent authority shall be borne by the audit agency.

24. Bid validity period:

The bid shall remain valid for 120 (one hundred twenty) days from the date of submission of the bid.

25. Further assigning of tender in whole or part:

The audit agency shall not assign the contract, the benefit or burden thereof to any other person or persons or body corporate. No under letting or subletting to any person or body corporate for the execution of the contract or any other part thereof is permitted under any circumstances.

26. False information:

In the event of furnishing false/incorrect information by the audit agency, the EMD in respect of such agency shall be forfeited. Further, if during the performance of the contract, it is detected that the contract has been obtained by furnishing the false/incorrect information in the tender, the agreement is liable to be terminated and performance bank guarantee and other payments due to audit agency shall be forfeited and the audit agency shall be liable to be blacklisted.

SECTION-II

TERMS OF REFERENCE FOR AUDIT AND ASSESSMENT OF QUALITY OF SERVICE OF SERVICE PROVIDERS

1. Objective:

1.1 The Telecom Regulatory Authority of India has been entrusted to lay-down the standards of quality of service to be provided by the service providers and ensure the quality of service and conduct the periodical audit of such services provided by the service providers so as to protect the interest of the consumers of telecommunication services.

1.2 The regulations -- the Standards of Quality of Service of Basic Telephone Service (Wire line) and Cellular Mobile Telephone Service, Regulations, 2009 (7 of 2009) dated 20th March, 2009, the Standards of Quality of Service for Wireless Data Services Regulations, 2012 (26 of 12) dated 4th December 2012 and Quality of Service of Broadband Service Regulations, 2006 (11 of 2006) dated 6th October, 2006 specify benchmarks for the parameters on Quality of Service (QoS) to be achieved by service providers. A copy of the said regulations is available at TRAI's website (www.trai.gov.in). The objective of the Terms of Reference is to carry out audit and assessment of quality of service of service providers. For this purpose, TRAI wants to engage an audit agency for audit and assessment of Quality of Service of service providers for Basic (Wireline) Telephone Services, Broadband and Cellular Mobile Telephone Services, as per the scope of work indicated in clause 2.

1.3 The scope of work of Audit and Assessment of Quality of Service of service providers includes:

- (a) Preparation of Performance Monitoring reports (PMRs) and uploading in the system of TRAI.
- (b) Live measurements of the performance of Service Providers (SPs) against the benchmarks for three days during each audit.
- (d) Drive test of the RF networks.
- (e) Audit of the performance of call centres with respect to their accessibility and percentage of calls answered by the operators and random customer feedback by calling the customers to get feedback of the services provided by the service providers.
- (f) Transfer of data generated by the RF drive test / live measurements / PMR/ audit to the server located at TRAI premises immediately on completion of each activity.
- g) Comparison of generated PMRs with the PMRs submitted by telecom service providers to TRAI.

1.4 S. No. (i) to (xii) of regulation 3 pertaining to Quality of Service (QoS) parameters for Basic Telephone Service, S. No. (i) to (x) of regulation 5 pertaining to QoS parameters for Cellular Mobile Telephone Service specified under the Standards of Quality of Service of Basic Telephone Service (Wire line) and Cellular Mobile Telephone Service Regulations,

2009 (7 of 2009) dated the 20th March, 2009, sl no 3.1, 3.7 and 3.8 of the Standards of Quality of Service for Wireless Data Services Regulations, 2012 dated 4th December 2012(26 of 12) and S. No. (i) to (viii) of regulation 3 of Quality of Service of Broadband Service Regulations, 2006 (11 of 2006) contain the parameters and benchmarks of the Quality of Service to be achieved by the service providers.

1.5 The parameters for Basic Telephone Service (Wire line) consist of various QoS indicators, which can be audited and assessed objectively. The list contains parameters like fault incidences, POI congestion and customer service parameters viz. mean time to repair faults, metering and billing credibility (post paid and pre paid), resolution of billing/charging complaints, period of applying credit/waiver/adjustment to customer's account, response time to the customer for assistance, termination/closure of service, time taken for refund of security deposit after closures; provision of a telephone after registration of demand, shift of telephone connection, etc.

1.6 The parameters of Quality of Service for cellular mobile telephone services are specified under the head (A) Network Service Quality Parameters (B) Customer Service Quality Parameters. The Network Service Quality Parameters include the parameters related to (i) Network Availability (ii) Connection Establishment, (iii) Connection Maintenance (iv) POI Congestion. The Customer Service Quality Parameters include metering and billing credibility (post-paid and prepaid), resolution of billing/charging complaints, period of applying credit/waiver/adjustment to customer's account, response time to the customer for assistance, termination/closure of service and time taken for refund of security deposit after closures. The parameter related to the service coverage is to be audited and monitored during drive test.

1.7 The parameters of QoS for wireless data specified in the regulation 3 of Standards of quality of service for wireless data Services regulations 2012 include Service provisioning/activation time, PDP context Activation Success rate and Drop rate

1.8 The parameters of Quality of Service for broadband services, specified in the regulation 3 of Quality of Service of Broadband Services Regulations, 2006, include service provisioning/activation time, fault repair and restoration time, billing performance, response time to customer for assistance, bandwidth utilization/ throughput, service availability, packet loss and network latency.

1.9 TRAI may modify the above parameters and benchmarks and may also add new parameters from time to time during the currency of contract and the bidder shall be bound by it.

1.10 The detailed explanation and measurement methodology of each parameters and benchmarks for Basic Telephone Service (Wire line), Cellular Mobile Telephone Service, Wireless data service and Broadband Service are given in the Explanatory Memorandum of the regulations mentioned in Clause 1.2. The parameters, whose data is to be monitored, verified and audited, but not limited to, are as follows:

(i) Cellular Mobile Telephone Service:
(A) 2G

Serial Number	Name of Parameter	Benchmark	Averaged over a period
A	Network Service Quality Parameters:		
(i)	Network Availability		
	(a) BTSs Accumulated downtime (not available for service)	$\leq 2\%$	One Month
	(b) Worst affected BTSs due to downtime	$\leq 2\%$	One Month
(ii)	Connection Establishment (Accessibility)		
	(a) Call Set-up Success Rate(within licensee's own network)	$\geq 95\%$	One Month
	(b) SDCCH/ Paging Channel Congestion	$\leq 1\%$	One Month
	(c) TCH Congestion	$\leq 2\%$	One Month
(iii)	Connection Maintenance (Retainability)		
	(a) Call Drop Rate	$\leq 2\%$	One Month
	(b) Worst affected cells having more than 3% TCH drop (call drop) rate	$\leq 3\%$	One Month
	(c) connections with good voice quality	$\geq 95\%$	One Month
(iv)	Point of Interconnection (POI) Congestion (on individual POI)	$\leq 0.5\%$	One Month

(B) 3G

Serial Number	Name of Parameter	Benchmark	Averaged over a period
A	Network Service Quality Parameters:		
(i)	Network Availability		
	(a) Node Bs' Accumulated downtime (not available for service)	$\leq 2\%$	One Month
	(b) Worst affected Node Bs due to downtime	$\leq 2\%$	One Month
(ii)	Connection Establishment (Accessibility)		
	(a) Call Set-up Success Rate(within licensee's own network)	$\geq 95\%$	One Month
	(b) RRC Congestion	$\leq 1\%$	One Month
	(c) Circuit Switched RAB Congestion	$\leq 2\%$	One Month
(iii)	Connection Maintenance (Retainability)		
	(a) Circuit switched Voice Drop Rate	$\leq 2\%$	One Month
	(b) Worst affected cells having more than 3% Circuit switched Voice Drop rate	$\leq 3\%$	One Month
	(c) connections with good Circuit switched voice quality	$\geq 95\%$	One Month
(iv)	Point of Interconnection (POI) Congestion (on individual POI)	$\leq 0.5\%$	One Month

(C) Customer Service Quality Parameters: (Includes 2G and 3G)

(v)	Metering and billing credibility – post paid	Not more than 0.1% of bills issued should be disputed over a billing cycle	One Billing Cycle
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(vi)	Metering and billing credibility -- pre-paid	Not more than 1 complaint per 1000 customers i.e. 0.1% complaints for metering, charging, credit, and validity	One Quarter
(vii)	(a) Resolution of billing/ charging complaints	≥98% within four weeks and 100% within six weeks	One Quarter
	(b) Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints	within 1 week of resolution of complaint	One Quarter
(viii)	Response Time to the customer for assistance		
	(a) Accessibility of call centre/ customer care	≥ 95%	One Quarter
	(b) Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	One Quarter
(ix)	Termination/ closure of service	≤ 7 days	One Quarter
(x)	Time taken for refund of deposits after closures	100% within 60 days	One Quarter

D. Wireless Data Service

Serial Number	Name of Parameter	Benchmark	Averaged over a period
i)	Service Activation /Provisioning	Within 4 hrs with 95% success rate.	One Month
ii)	PDP Context Activation Success Rate	≥95%	One Month
iii)	Drop rate	≤ 5%	One Month

(ii) Basic Service (wire line):

Serial Number	Name of Parameter	Benchmark	Averaged over a period
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(i)	Fault incidences (No. of faults/100 subscribers /month)	≤ 7	One Quarter
(ii)	Fault repair by next working day	For urban areas: By next working day: $\geq 85\%$ and within 5 days: 100%. For rural and hilly areas: By next working day: $\geq 75\%$ and within 7 days: 100%. Rent Rebate Faults pending for >3 days and ≤ 7 days: Rent rebate for 7 days. Faults pending for >7 days and ≤ 15 days: Rent rebate for 15 days. Faults pending for >15 days: rent rebate for one month.	One Quarter
(iii)	Mean Time To Repair (MTTR)	≤ 10 Hrs	One Quarter
(iv)	Deleted		
(v)	Point of Interconnection (POI) Congestion (on individual POI)	$\leq 0.5\%$	One month
(vi)	Metering and billing credibility – post paid	Not more than 0.1% of bills issued should be disputed over a billing cycle	One Billing Cycle
(vii)	Metering and billing credibility -- pre-paid	Not more than 1 complaint per 1000 customers, i.e., 0.1% complaints for metering, charging, credit, and validity	One Quarter
(viii)	Resolution of billing/ charging complaints	$\geq 98\%$ within 4 weeks 100% within 6 weeks	One Quarter
(ix)	Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints	within 1 week of resolution of complaint	One Quarter
(x)	Response Time to the customer for assistance		
	(a) Accessibility of call centre/	$\geq 95\%$	One Quarter

	customer care		
	(b)Percentage of calls answered by the operators (voice to voice) within ninety seconds	≥ 95%	One Quarter
(xi)	Termination/ closure of service	≤ 7 days	One Quarter
(xii)	Time taken for refund of deposits after closures	100% within 60 days.	One Quarter

(iii) Broadband Service:

S.N	Parameters	Benchmark	Averaged over a period of
(i)	Service Provisioning/ Activation time	100% cases in ≤15 working days (subject to technical feasibility). In all cases where payment towards installation charge & security deposit is taken and the Broadband connection is not provided within 15 working days, a credit at the rate of Rs.10/ per day, subject to a maximum of installation charge or equivalent usage allowance shall be given to the customer, at the time of issue of first bill.	One Month
(ii)	Fault Repair/ Restoration Time	By next working day: > 90% and within 3 working days: 99% Rebate: (a) Faults Pending for > 3 working days and < 7 working days: rebate equivalent to 7 days of minimum monthly charge or equivalent usage allowance (b) Faults Pending for > 7	One Month

		<p>working days and < 15 working days: rebate equivalent to 15 days of minimum monthly charge or equivalent usage allowance</p> <p>(c) Faults Pending for > 15 working days: rebate equivalent to one month of minimum monthly charge or equivalent usage allowance</p>	
(iii)	<p>Billing Performance</p> <p>Billing complaints per 100 bills issued</p> <p>%age of Billing Complaints resolved</p> <p>Time taken for refund of deposits after closure:</p>	<p>< 2%</p> <p>100% within 4 weeks</p> <p>100% within 60 days</p>	One Month
(iv)	Response time to the customers for assistance	<p>% age of calls answered by operator (Voice to Voice)</p> <p>Within 60 seconds > 60%</p> <p>Within 90 seconds > 80%</p>	One month
(v)	<p>Bandwidth utilization/ Throughput</p> <p>a) Bandwidth Utilization</p> <p>i) POP to ISP Gateway Node [Intra-network] Link(s)</p> <p>ii) ISP Gateway Node to IGSP / NIXI Node upstream Link(s) for International connectivity</p> <p>b) Broadband Connection Speed (download)</p>	<p><80% link(s)/route bandwidth utilization during peak hours (TCBH). If on any link(s)/route bandwidth utilization exceeds 90%, then network is considered to have congestion. For this additional provisioning of Bandwidth on immediate basis, but not later than one month, is mandated.</p> <p>Subscribed Broadband Connection Speed to be met >80% from ISP Node to User.</p>	One month
(vi)	Service Availability / Uptime(for all users)	<p>> 90% quarter ending June 2007;</p> <p>> 98% with effect from quarter ending September</p>	One quarter

		2007 and onwards	
(vii)	Packet Loss(for broadband access)	<1%	One month
(vii)	Network Latency (for wired broadband access)		One month
	User reference point at POP / ISP Gateway Node to International Gateway (IGSP/NIXI)	<120 msec	
	User reference point at ISP Gateway Node to International nearest NAP port abroad (Terrestrial)	<350 msec	
	User reference point at ISP Gateway Node to International nearest NAP port abroad (Satellite)	<800 msec	

2. Scope of work:

2.1 The main purpose of the tender is to audit and assess the Quality of Service rendered by the service providers providing basic telephone service (wireline), cellular mobile telephone service, wireless data service and broadband service.

2.2 The audit agency shall undertake audit and assessment of Quality of Service provided by every service provider (licensee) in each of the telecom circles/metro service areas under the respective Zone in the following manner:-

(a) In respect of Cellular Mobile Telephone service including wireless data, all the service areas/circles in each Zone shall be audited in every quarter of the year i.e. a service area will be audited four times in a year.

(b) In respect of Basic service (wireline) and Broadband service, a service area/circle in the contracted Zone shall be audited for only one quarter in a year, i.e. a service area will be audited once in a year. While the selection of Service Areas for each quarter can be finalised in consultation with TRAI, at least one circle is to be audited in each quarter. The Agency shall cover all the Service areas in a year.

2.3 The Audit agency shall undertake the audit work as follows: -.

(a) Generation of reports at service providers site as part of QoS monitoring reports i.e. quarterly Performance Monitoring Reports (PMRs) and monthly Point of Interconnect (POI) Congestion Reports for Basic and Cellular Mobile Services with reference to the records maintained by the service provider and the system logs for the period. The Audit agency shall generate the quarterly PMR at site and upload it immediately to the

server. The PMR report formats and parameters are tentative and any modifications or additions of parameters should also be taken. The scope should cover all future PMR parameters as and when defined by TRAI during the duration of the contract. The PMRs are to be generated on monthly basis for Network Service Quality Parameters of cellular mobile telephone services including wireless data services and on quarterly basis for Customer Service Quality Parameters of cellular mobile telephone services, basic (wireline) services and broadband services as per the parameters specified in clause 1.10. The PMRs so generated shall be uploaded on the system latest by 7th of the following month. The quarterly PMR of the Network Service quality parameters has to be computed based on the monthly PMR generated. For PMR comparison, TRAI will provide the PMR submitted by TSPs of the corresponding quarter.

(b) Verification of the performance of service providers against the Quality of Service benchmarks laid down by TRAI using live measurement for three days for the parameters for the services as specified in clause 1.9 during the month/quarter in which the audit and assessment is carried out. The results shall be uploaded immediately to TRAI's server;

(d) RF drive tests of the mobile networks of service providers; the results should be uploaded to the TRAI server at the end of the drive test in the sample form prescribed by TRAI. The username and password for accessing TRAI portal will be issued to successful bidder. The audit agency shall be required to carry out an analysis of the drive test and load the results giving such information and in such format as may be agreed by TRAI including graphical representation. The Audit agency shall preserve the complete log files for a period of six months after the expiry of the contract and shall produce the same to TRAI as and when required to do so;

(e) Audit of the performance of call centres with respect to their accessibility and percentage of calls answered by the operator. Making test calls to customers and taking their feedback about the services of the service providers. The Automatic Call Distribution (ACD) records shall also to be verified for the calls answered by the operators within 60 seconds or 90 seconds as applicable.

(f) Audit of the availability of level '1' services including emergency services of the Service Providers in each of the Service Area. The Agency shall also assess the performance on inter operator call completion through test calls for each service provider in each of the service areas.

The data captured has to be stored for a period of six months. However, the consolidated data for every quarter (in formats approved by TRAI) needs to be preserved or stored for future references, trend analysis and other requirements. It should also be possible to generate reports averaged over the year for the four quarters from the data so preserved, as required by TRAI.

2.4 The Telecom Licensed Service Areas/Circle for the purpose of this tender comprise of the following:

North Zone: Delhi, Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Rajasthan, Uttar Pradesh-East and Uttar Pradesh-West (including Uttaranchal). For the cellular mobile telephone service the service area of Delhi includes Ghaziabad, Faridabad, Noida and Gurgaon.

South Zone: Chennai, Andhra Pradesh(including Telangana), Karnataka, Tamilnadu (excluding Chennai) and Kerala.

West Zone: Mumbai, Maharashtra (including Goa and excluding Mumbai), Gujarat and Madhya Pradesh (including Chattisgarh).

East Zone: Kolkata, West Bengal (including Andaman & Nicobar, Sikkim and excluding Kolkata), Bihar (including Jharkhand), Orissa, Assam and North East which includes Arunachal Pradesh, Meghalaya, Mizoram, Nagaland, Manipur and Tripura.

2.5 The details of the areas covered under each Telecom Circle/ Metro Service Area, details of service providers (licensees) operating in each Telecom Circle/ Metro Service Area and details of subscriber base in respect of Basic Telephone Service (wireline) & Cellular Mobile Telephone Service Providers and Broadband Service Providers are given in **Annexure-2A and 2B**, respectively.

2.6 The audit and assessment of Quality of Service shall be conducted for BSNL, MTNL, private basic service providers, unified access service providers, cellular mobile service providers and ISPs (providing broadband service) in various service areas for basic telephone service (wireline), cellular mobile telephone service including wireless data service and broadband service. The audit agency is required to conduct the audit and assessment of Quality of Service of Broadband Service only in respect of the service providers who are having broadband subscriber base of more than 10,000 subscribers in their licensed service areas taken together. The updated data in respect of licensees (service providers) who have commissioned service and their subscriber base/Mobile Switching Centres (MSCs)/BTS'/Exchanges/Internet Service Providers Central Nodes (ISP Nodes) shall be intimated by TRAI from time to time and the Audit agency shall carry out the audit and assessment of Quality of Service accordingly thereafter. It may be possible that in some cases the data is available centrally in one NOC which is away from the PoPs/MSCs/SDCAs. In that case auditor shall arrange the data extraction from the central location. The audit agency should give a detailed composition of the proposed key team and tasks of each team member including supervisor that will be involved in the audit and assessment of quality of service at different service areas.

2.7 The audit and assessment of Quality of Service for all the service providers in a Telecom Circle/ Metro Service Area / Licensed Service Area shall be completed in the same quarterly period.

Generation of performance reports against QOS benchmarks:

2.8 The detailed explanation and measurement methodology of each parameters and benchmarks for basictelephone service (wireline), cellular

mobile telephone service including wireless data service and broadband service are given in the Explanatory Memorandum in the said Regulations mentioned in Clause 1.2. The parameters whose data is to be generated at the service provider's site, verified and audited are given at clause 1.9. TRAI may modify these parameters and benchmarks and may also add new parameters from time to time during the currency of contract and the audit agency shall be bound by it.

Sample size for cellular mobile services:

2.9 100% Gateway MSCs (GMSC) and Mobile Switching Centres (MSC) of all the Cellular Mobile Service Provider (CMSP) or Unified Access Service Providers (UASP) shall be covered in specified circles/ service areas in respective Zone in each of the **quarterly** period. **All the service areas are required to be covered in each quarterly period of the year.** The service area-wise details of the MSCs of all service providers are given in **Annexure-2D**.

Number of exchanges to be covered for Basic (Wireline) services:

2.10 Sampling shall be done for each service provider separately. In an LSA, sample shall include all exchanges, including rural exchanges, in 10% of SDCAs in the LSA or 10 SDCAs, whichever is more, subject to maximum of the number of SDCAs covered by the basic service provider in the LSA. SDCAs selected should be evenly spread over the LSA and should include major population centres. A service area/circle in the contracted Zone shall be audited only once in a year. The break-up of the total number of exchanges of BSNL, MTNL and private basic service operators circle/service area-wise, including urban and rural exchanges, and the number of exchanges, both urban and rural, that will be covered during the year (i.e. four quarters) for audit and assessment of the Quality of Service is indicated at **Annexure-2C**.

Number of POPs to be covered for Broadband Services:

2.11 Sampling shall be done for each service provider separately. In an LSA, sample shall include all POPs located in 10% of SDCAs in the LSA or 10 SDCAs, whichever is more, subject to maximum of the number of SDCAs covered by the service provider in the LSA. SDCAs selected should be evenly spread over the LSA and shall include major population centres. List and details of POPs shall be obtained from NOC/ISP Node of the operators. A service area/circle in the contracted Zone shall be audited only once in a year.

2.12 The schedule for conducting the audit and assessment of Quality of Service shall be finalised by the Audit agency, in consultation with TRAI, before the start of audit and assessment of the Quality of Service in each quarter. The Audit agency is required to submit sample design based on the above criteria.

Mode of conducting Audit and Assessment of Quality of Service:

2.13 The generation and verification of performance of service providers against QoS benchmarks will involve measuring of specified reporting parameters, checking of complete records, analysis of procedure and method utilized by various service providers in measuring the parameters and method of averaging for the purpose of reporting. The Audit agency shall include critical findings licensee-wise in each **quarterly** report. This will help to educate the service provider to follow uniform methodologies and utilizing same software preferably MS Word and MS Excel in windows environment. TRAI will issue suitable instructions to service providers in this respect after the award of this contract.

Audit methods and procedures:

2.14 To measure each quality of service parameter defined by TRAI, the two main sources of data collection are:

- Audit of MIS/System reports at exchanges (OMC or MSCs) or ISP Node of the service provider.
- Primary data collection, live measurement and check back calls (live observations done during the visits)

The audit will have to be conducted in each centre of study to generate various types of data. Thus, for data collection, following activities shall be undertaken during the appraisal exercise.

Collection of MIS data of OMC or MSC or ISP Node and Generation of PMR

2.15 For this TRAI has already suggested to the service providers to maintain the QoS source/raw data. The Agency with the help of Service Provider shall extract the raw data from the system in service Providers Data Center/OMC. From the source/raw data, the audit agency should generate the quarterly/monthly performance monitoring reports (PMR). Methodology adopted will be checked against instructions and standards to see if the measurements adhere to specifications.

Live Measurements and Live Data collections

2.16 During the audit and assessment, following activities would be undertaken for live measurements and live data collection.

a) Live data collection for three days

The main purpose of 3 day live measurement is to evaluate the network parameters on intraday basis. While the monthly PMR report provides an overall view of the performance of QoS parameters, the 3 day live data helps looking at intraday performance on the network parameters. All the calculations are done on the basis of that raw data of 3 days.

The 3 day live data provides a sample of 9 days in a quarter (3 days each month of a quarter) with hourly performance, which enables the auditor to identify and validate intraday issues for an operator on the QoS network parameters..

Network related parameters are to be evaluated for a period of 3 days in each month. 3 day live audit shall be conducted for 3 consecutive weekdays for each month. The data shall be extracted from each operator's server/ NOC etc. at the end of the each day. The extracted data shall be used to create a report (similar to PMR report) to assess the various QoS parameters.

b) Audit and Assessment of complaint redressal and provisioning of new broadband connections

2.17 Telephonic interviews shall be conducted among a sample of subscribers of telephone –

- in basic service (wireline) for those customers who reported a fault complaint, billing dispute;
- in case of Mobile operators, who have had a recent billing dispute;
- in case of Broadband service for those who requested for a new connection, reported a fault complaint, billing dispute, complaint of Broadband connection speed (download).

Data should be obtained on:

- Occurrence of fault complaints
- Clearance of fault within stipulated time
- Incidence of billing disputes
- Clearance of billing complaints within stipulated time
- Attendance to requests for closure/ termination of service

Sampling Procedure & quality control

2.18 In order to get a correct and meaningful result from audit it is important to ensure that the right sampling procedure is followed. Equally important is the process of ensuring that quality control parameters are put in place. Care should also be taken to distribute the sample to obtain a random list. The distribution of sample sizes should be evenly distributed. The sampling procedure for various activities to be carried is given below:

Sample for telephonic interview for billing complaints

2.19 The sample size for telephonic interview of billing complaints in each audit shall be 100 subscribers or the total number of complaints, whichever is less per service provider for each service in a licensed service area. All the complaints booked shall be treated as the total population for selection of samples.

Sample for telephonic interview for new connection for Broadband Service)

2.20 The sampling frame would be for Point of Presence/ ISP Node of Broadband Service Provider. Here, the total sample size (10% of the applicants in the previous month or 100 whichever is less for every service provider) would be randomly selected from the records/registers to make check back calls.

Sample for telephonic interview for service complaints/ requests

2.21 The operator is required to provide the details of the service complaints/ requests for the month previous to the audit month for Cellular Mobile Telephone Services, Basic (wireline) Services and Broadband Services. For broadband services, complaints related to download speed shall also be covered. From the list of these complaints/requests (10% or 100 per service provider per license service area, whichever is less) sample would be drawn randomly to make check back calls. A notice of minimum 3 (three) weeks will be provided to service provider by Audit agency for arranging and supplying the data required for audit of exchanges, ISP nodes and MSCs to be covered.

c) Audit and Assessment of Call Centre/ customer care promptness and live measurement through test calls

2.22 Test calls shall be made to assess the availability and efficiency of Level 1 services and complaint centre accessibility. The telephone/SIM Cards/Instruments for testing purposes shall be provided by the concerned service provider(s) in whose network the audit and assessment of Quality of Service is carried out. The details regarding test calls are given below:

(a) Testing of Level 1 Services:

2.23 Level 1 Services such as police, fire, ambulance (Emergency services) in the case of both Mobile service providers and basic telephone service providers. The Level 1 Services essentially to be verified is at Annexure 3. Test calls will be made from all the levels working in a particular SDCA visited. Again, the total sample size (300 per license service area per quarter) would be equally distributed among the different SDCAs visited, and the distribution among the active levels would be in proportion to the capacity of each level in that SDCA. A log of the call records is to be maintained by the agency with called and calling Numbers and time of the call and shall be presented to TRAI if required.

(b) Inter-operator call assessment:

2.24 Inter Network calls i.e. calls made from one operator to another within the same license area are required to be made to judge the ease of connectivity amongst the operators.

2.25 A sample of 2 X 50 test calls per service provider within the licensed service area shall be made at different point of time to the free test numbers of another service provider (50 calls between 1000 to 1300 Hrs. and 50 calls between 1500 to 1700 hrs. for basic service and between 1100 to 1400 hrs. and between 1600 to 1900 hrs.) for cellular mobile service. The results of these calls shall be compiled and reported separately for each service provider service area-wise.

2.26 The telephone/SIM Cards/Instruments for testing purposes shall be provided by the concerned service provider(s) in whose network the audit and assessment of Quality of Service is carried out.

A log of the call records is to maintained by the agency with called & calling Numbers and time of the call and shall present the same to TRAI if required.

(c) Testing of Complaint Centre Accessibility and response time:

(i) Basic Telephone Service (wireline) and Cellular Mobile Telephone Service:

2.27 The Audit agency shall measure the performance of both basic **telephone** service (wireline) &cellular mobile services against the benchmarks of the following Quality of Service parameters: -

Response time to the customer for assistance:

(a) Accessibility of call centre/customer care >= 95%

***(b) % age of calls answered by the operator (voice to voice):
within 90 seconds = 95%***

2.28 The procedure for assessment of the performance in respect of above parameters shall be made using the traffic data at the point of termination to call centre from mobile/ basic telephone network. Traffic at the tandem or trunk or gateway MSC outgoing circuits to IVR of call centre shall be measured as per the traffic counter available in the respective switch to assess the accessibility of call centre.

2.29 In the case of parameter % of call answered by the operator voice to voice, assessment of IVR traffic data and CRM traffic data shall be analysed during the time consistent busy hour (TCBH) of call centre.

2.30 In addition, the audit agencies shall also make the test calls and correlate the results with the traffic data analysis.

2.31 The procedure (IVR menu and sub-menu) and ease of accessing the operator within the benchmark laid down by TRAI, both for postpaid and prepaid customers shall be assessed and reported. In this regard para 3.11.4 of the Explanatory Memorandum to the Standards of Quality of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009 and provisions of the Telecom Consumers Complaint Redressal Regulations, 2012 shall be followed.

(ii) Broadband service:

2.32 The audit agency shall measure the performance of Broadband service against the benchmarks of the following Quality of Service parameters: -

Response time to the customer for assistance: % age of calls answered by operator (voice to voice):

within 60 seconds = 60%

within 90 seconds = 80%

Measurement:

2.33 A sample of 2 X 50 calls per service provider shall be made at different point of time to the call centre of each service provider from each licensed service area (50 calls between 1000 to 1300 Hrs. and 50 calls between 1500 to 1700 hrs.) for basic telephone service (wireline) and similarly, 2 X 50 calls to the call centre of each service provider (50 calls between 1100 to 1400 hrs. and 50 calls between 1600 to 1900 hrs.) for cellular mobile telephone service from each licensed service area to ensure statistical significance. The time to connect to IVR shall be noted for all these calls. This is the wait time before an automatic answer machine (IVR) message begins. The Audit agency shall then measure the gap between the time when the last digit of the number is dialled, and the time when the IVR message begins. Similarly the wait time before a Call Centre agent responds to a test call shall be measured for all such test calls.

A log of the call records is to maintained by the agency with called & calling Numbers and time of the call and shall present the same to TRAI if required

Verification and audit of records

2.34 The audit agency shall verify and audit the following records in respect of Basic Telephone Service (wireline):

- Call Centre records for complaints
- FRS details for fault complaints, fault repair and MTTR (Mean Time To Repair)
- Commercial records for billing details, billing disputes and redressal thereof
- Past traffic reports at local and TAX (Trunk Automatic exchanges) for Call Completion Rate/**Answer to Seizure Ratio** calculations
- Checking of customer complaint handling through live test at the call centre
- 100 Nos. of service complaints/ requests and 100 Nos. of billing related complaints shall be taken up by the auditing agency for verifying their redressal as per the record of the service provider.

2.35 The audit agency shall verify and audit the following records in respect of Cellular Mobile Telephone Service:

- Call Centre records for complaints
- Network maintenance and planning department (OMC and Drive Test) records for QOS parameters

- System/ Network outage details, Call Set-up Success Rate, Blocked Call Rate, Call Drop Rate, **worst affected cells having more than 3 % TCH drop rate**, Voice Quality, Service Coverage and POI congestion
- Commercial and customer care records for billing disputes, redressal and refunds of payment
- Checking of customer complaint handling through live test at the call centre
- 100 Nos. of service complaints/ requests and 100 Nos. of billing related complaints shall be taken up by the auditing Agency for verifying their redressal as per the record of the service provider.

2.36 The Audit agency shall verify and audit the records maintained by Broadband service providers relating to

- Call Centre records for complaints
- FRS details for fault complaints, fault repair
- Records for requests for new connection, and supplementary services
- Commercial records for billing details, billing disputes and redressal thereof
- Checking of customer complaint handling through live test at the call centre
- service complaints/ requests and billing related complaints shall be taken up by the auditing Agency for verifying their redressal as per the record of the service provider.
- Bandwidth Utilization/ Throughput
- Broadband connection speed
- Service Availability/Uptime
- Packet Loss and Latency measurements.

2.37 Network performance parameters like Bandwidth Utilisation/Throughput including Broadband Connection Speed, Packet Loss and Latency shall be measured on sample basis by the Audit agency.

2.38 The detailed methodology for each Quality of Service parameter is given in the Explanatory Memorandum to the Quality of Service of Broadband Service Regulations, 2006 dated 6th October, 2006 (11 of 2006).

2.39 The signature of the Nodal Officer nominated by the service provider for coordination with the audit agency shall be taken on all the formats containing the verified data for all the parameters. The audit agency shall also produce these formats or records to TRAI, as and when called for by TRAI. The audit agency shall preserve all the data formats containing the observations made by the audit agency for a period of six months after the expiry of the contract and shall produce the same to TRAI as and when required to do so.

2.40 The network operation centre (NOC) or operation and maintenance centre (OMC) of service providers are generally on centralized basis either at service area as a whole or on regional basis. In some of the cases it is on national basis. Similarly, call centre and billing centres are also centralized. Audit agency shall

have to take live measurements and collection of one month data or audit by actual visit to such NOC, OMC, call centre and billing centre.

2.41 Procedure to be followed by the audit agency for cellular mobile telephone service data generation, verification and audit.

S.No.	Parameter	Procedure
i)	Network availability (a) BTS/ Node Bs' accumulated down time (b) Worst affected BTSs/ due to down time Node Bs'	The fault Alarm tracking details at the OMC (MSC) for the network outages (due to own network elements and infrastructure service provider end outages) will be verified by Audit agency for arriving at the figures reported to TRAI.
ii)	Call Set-up Success Rate	The cell wise data generated through counters/MMC available in the switch for traffic measurements to be verified by the Audit agency.
iii)	Blocked Call Rate	Both for SDCCH and TCH congestions the data in MSCs shall be verified and compared with the data reported to TRAI in the Quarterly PMRs.
iv)	Call Drop Rate/ Circuit switched Voice Drop Rate	This parameter is to be measured by the system generated (defined counters are available in the system for traffic measurement) cell wise dropped call data and total calls established figures to arrive at the authenticity and accuracy of the benchmark reported to TRAI.
v)	% Connections with good voice quality	This parameter is to be measured from the system generated data on a scale from 0 to 7 for GSM and FER value for CDMA technology. The Audit agency should also collect the relevant city wise drive log files for all drive tests conducted to verify the parameter.
vi)	Service coverage	The Audit agency should also collect the relevant city wise drive log files for all drive tests conducted to verify the parameter.
vii)	POI Congestion	The traffic data generated through Gateway MSCs (GMSCs) and reported to TRAI in POI congestion reports shall be verified.
viii)	Metering and Billing credibility	The Audit agency should audit the billing complaints details on complaints received during the quarter and used for arriving at the figures reported to TRAI.

ix)	% of Billing Complaints resolved	Audit of billing complaints resolved and the total complaints received should be carried out to check the figures reported to TRAI. At the same time, the Audit agency should also conduct random live back checks of complaints.
x)	Period of applying credit/waiver/adjustment to customers account from the date of resolution	The Audit agency should check the billing complaints for which credit/waiver/adjustment to be made on resolution of the complaints within one week.
xi)	Termination/closure of service	The data should be verified for termination/closure of the services within 7 days from the date of request.
xii)	Time taken for refund of deposits after closure	Audit agency should verify that 100 % deposits should be refunded within 60 days. At the same time, the Audit agency should also conduct random live back checks of all such subscribers entitled for a refund.

Wireless Data

S. No.	Parameter	Procedure
i)	Service Activation /Provisioning	The Audit agency should verify the 100% activation/provisioning in the Service Providers MIS system
ii)	PDP Context Activation Success Rate	This parameter is to be measured by the system generated data. (defined counters are available in the system for traffic measurement)
iii)	Drop rate	This parameter is to be measured by the system generated data (defined counters are available in the system for data traffic measurement)

Drive Tests:

2.42 In the case of Cellular Mobile Service, the exercise of QoS assessment should not be limited to generation, verification and audit of data but the audit agency shall also verify the parameters by conducting extensive drive test in all service areas, as per the details given below, to assess the network performance.

2.43 There would be two types of drive tests. One is operator assisted drive test and the other is independent drive tests. The details of these drive tests are given below:

2.44 Operator Assisted Drive Tests: The primary aim of these drive tests would be to cross-check/validate the data on Quality of Service being provided by the telecom service providers to TRAI in all the SSAs in the country during a period of one year. These drive tests will be conducted in such a manner so as to enable identification of network element deficiency and initiation of improvements. The operator will provide necessary equipment along with assistance for carrying out such drive tests

2.45 Drive test shall be conducted in SSAs in each month so that all the SSAs in the region are covered during a year. SSAs are divided into two categories i.e. one normal and other difficult. In normal LDCAs drive test shall be conducted for 3 days covering a minimum distance of 250kilometres in city area and adjoining areas including important indoor sites. The drive test shall be held for 3 consecutive days in the select SSA. Minimum distance of 80 km may be covered on each day. In difficult SSAs, drive test shall be conducted for 6 days covering a distance of 500 km. The drive test shall be held for 6 consecutive days in the select LDCA. In this case also, a minimum distance of 80 km may be covered on each day. The Number of total SSAs indicating the difficult SSAs are at **Annexure 4. The Schedule of the drive test indicating the SSAs to be covered on each month will be intimated by TRAI. It is possible that to cover the entire SSAs during an year, drive test may be conducted in more than one SSAs in a Service area in a month.** The results of analysis of data generated during such drive tests shall be uploaded, immediately on completion of the drive test, to the central server at TRAI for processing and preparing report at the end of the drive test. The Audit Agency shall prepare a combined diagram for the SSA indicating the drive test outputs for all the operators plotted in a map with proper label for road , places etc. in CAD or similar software.

2.46 Independent Drive Tests: TRAI has been receiving complaints from subscribers relating to the poor network coverage in certain areas of the cities. Such complaints may need to be checked and verified by way of a drive test to be conducted independently by audit agency with own personnel/equipment or leased or hired from supplier of such equipment /manpower. **Thus, the audit agency could be asked to do independent drive tests spread across the contracted zones limited to a maximum of 10 drive tests per licensed service area, in a year.** For example say for West zone comprising of 4 license service areas, all the 40 independent drive tests could be spread in one licensed service

area or spread across the entire West zone. The location for these drive tests would be selected based on the subscriber complaints being received by TRAI **or as decided by TRAI**. Independent drive test shall cover a city and adjoining areas covering a minimum distance of 80kilometres including congested areas and important indoor sites. Each drive test shall cover a maximum of 8 Service Providers simultaneously. Such drive tests will be spread across all the quarters in an year.

Drive Test Methodology

2.47 For drive test, the following procedure shall be adopted:

i. The audit agency shall discuss with Service provider about the coverage before starting the drive test (with coverage map)and study the coverage detail in terms of the signal strength. Based on the signal strength as depicted in the coverage map, the drive test should be done to check the following parameters:

- a. Coverage-Signal strength
- b. Voice quality
- c. Call setup success rate
- d. Blocked calls
- e. Call drop rate

ii. The audit agency shall analyse the network related complaints of concerned SSA. The drive test shall be conducted with more focus on areas where large number of network related complaints are received

iii. The drive test shall cover cities and adjoining towns/ rural areas where the service provider has commenced service, including congested areas and indoor sites.

iv. The drive test shall cover the routes including expressways, major and secondary roads / streets, Commercial, residential areas/Commercials estates to check the in-building network performance.

v. The drive tests of each mobile network shall be conducted between 10 am and 8 pm on weekdays.

vi. The Vehicle to be used in the drive tests shall be equipped with the test tool that automatically generates calls on the mobile telephone networks.

vii. The speed of the vehicle should be kept at around 30-50 km/hour (around 30 km/hr in case of geographically small cities)

- viii. The holding period of each test call will be 120 seconds.
- ix. A test call will be generated 10 seconds after the previous test call is completed.
- x. Measurement using engineering handsets would not be acceptable.
- xi. The dedicated originating and terminating mobile unit's antenna shall be placed at the same height and in the same vehicle. Moreover, the height of the antenna should be uniform in case of all service providers.
- xii. Random Test drive at hot spots (6 hotspots/day) for assessing the mobile data services across the concerned SSA

Comparison with PMR submitted by TSPs

The TSPs regularly submit their Performance monitoring reports to TRAI and the same are compiled quarterly by TRAI HQ. The PMRs generated by the auditor from the raw data is to be compared with the compiled data provided by TRAI in respect of mobile services 2G & 3G

The PMR comparison for the mobile services is to be submitted as an addendum to the main report on the day of submission of report or within 5 days of provision of PMRs by TRAI if TRAI could not provide the same before the 5 days before the report submission date.

3. Miscellaneous:

3.1 Expenses towards boarding, lodging and travelling for conducting audit and assessment of Quality of Service shall be borne by the audit agency itself. This work is required to be conducted at the premises of the service providers such as exchanges, MDFs, MSCs/GMSCs, call centres, FRS, help desk, Customer Relations Management system and billing centres where it is possible to measure the parameters. The service provider will extend all facilities including instruments/testing telephones /mobile phones/SIM cards, technical support, equipment and other material for conducting audit and assessment of Quality of Service.

3.2 TRAI at any point of time can ask for authenticity of any observation furnished for service providers. TRAI has the right to verify authenticity of each of the observations. This may also involve contacting any service provider again for this purpose. Expenses towards boarding, lodging and travelling for the staff of the Audit agency for this purpose shall also be borne by the Audit agency itself.

4. Reporting Formats:

4.1 The audit agency is required to develop data formats including executive summary, critical findings and detailed data analysis thereof for

reporting the results of such audit and assessment. The audit agency may utilise software for reporting, preferably MS Word & MS Excel in Window environment.

4.2 The audit agency shall submit to TRAI sample design and sample reporting formats within 4 weeks of signing of the agreement. TRAI may suggest modifications to the sample design and sample reporting formats and the audit agency shall modify the sample design and sample reporting formats, as suggested by TRAI, and final approval shall be taken before taking up the job in hand. The final approved design and reporting format shall be submitted by the audit agency within time period as specified in the delivery schedule at clause 7, after incorporating modifications/corrections suggested by TRAI. TRAI's decision in this matter shall be final.

All these reports shall be enabled as online reports with sufficient flexibility of querying against various parameters.

4.3 If representative of TRAI is deputed for verification, the audit agency shall extend all cooperation with such representative of TRAI in the verification/ audit process and he shall be supplied with all the information needed for such verification.

4.4 TRAI may also suggest changes to the reporting format at any point of time, in case it feels that such a change is necessary and the Audit agency shall carry out such changes in the reporting format.

5. Deliverables

5.1 **Quarterly Reports:** The audit agency shall submit quarterly reports in the formats approved by TRAI for the purpose. Five copies of such report covering all service areas/ circles which are audited during the quarterly period shall be submitted to TRAI within the time period given in the delivery schedule at clause 7 below.

5.2 The reports should also be generated on line through TRAI's MIS system or such other system as available at TRAI which had taken various inputs from different audit activities as per the scope of work for all the service areas. The soft copies of each report shall also be submitted by the Audit agency along with the hard copies.

5.3 The report shall contain the Audit results of service areas including executive summary, critical findings and comparison of performance of the service providers on various quality of service parameters for which Audit work was undertaken during the **quarter**.

5.4 Reports shall be submitted for approval within one month of the completion of each **quarter** for audit and assessment of QoS parameters for basic service, cellular mobile service and broadband service. The report shall contain the findings on audit and assessment of QoS provided by service providers carried out in accordance with Clause 2 above. The report shall contain performance of each service provider for each licensed service area against the Quality of Service parameters. The

report shall also contain a comparative analysis of performance of all the service providers in a licensed service area. The report shall also contain an Executive Summary and critical finding along with detailed analysis.

5.5 A separate report is also required to be submitted for each company/group of companies covering each circle/service area at the end of the year. The report shall also contain an Executive Summary and critical finding along with detailed analysis to share with the service provider and take further follow-up action.

6. TRAI's Inputs:

6.1 TRAI will make available the relevant Quality of Service Regulations of Basic (wireline), Cellular Services and Broadband Service. TRAI will also make available details of contact persons of service providers and such other information requested by the audit agency which is available in TRAI and which is necessary for carrying out the audit and assessment of Quality of Service of service providers.

6.2 Data storage space shall be provided by TRAI in the available SAN or to be provided by TRAI. The audit agency shall submit the detailed calculations for such logical space requirement along with the bid.

7. Delivery Schedule

S. No.	Deliverable	Period
	Date of award of work as per the contract say (D)	
1.	Submission of all sample design and reporting formats by the Audit agency	D+2 weeks
2.	Submission of final design and reporting formats by the Audit agency incorporating modifications and corrections suggested by TRAI and its acceptance	D+4 weeks
3.	Commencement of audit and assessment of Quality of Service	Beginning of - the quarter following date of award of work (D) or any subsequent quarter, as decided by TRAI
4.	Submission of first quarterly report	One month from the end of the first quarter
5.	Submission of second quarterly report	One month from the end of the second quarter
6.	Submission of third quarterly report	One month from the end of the third quarter
7.	Submission of fourth quarterly report	One month from the end of the

		fourth quarter
8.	Commencement of audit and assessment of Quality of Service for the first quarter for the extended period	From the end of the fourth quarter or any later period as decided by TRAI
9.	Submission of first quarterly report for the extended period , if any	One month from the end of the first quarter of extended period
10.	Submission of second quarterly report for the extended period , if any	One month from the end of the second quarter of extended period
11.	Submission of third quarterly report for the extended period , if any	One month from the end of the third quarter of extended period
12.	Submission of fourth quarterly report for the extended period , if any	One month from the end of the fourth quarter of extended period

SECTION-III

Schedule for Financial Bid for Audit and Assessment of Quality of Service

The Audit agency shall submit the Financial Bid in the format given below:

Note:

- *In respect of Cellular Mobile Telephone service, all the service areas/circles shall be audited in every quarter of the year i.e. a service area will be audited four times in a year. In respect of Basic service (wire line) and Broadband, a service area/circle shall be audited only once in a year.*
- *The rates shall be inclusive of the online transfer of data generated by RF drive test/ live measurement/ PMR/audit & report generation as per the requirements of the tender document and all the taxes, levies, duties etc.*

Zone: North zone

Sl. No.	Name of the Service Area	Services	Quotation for a year (Rupees in figures)	Quotation for a year (Rupees in words)
1	Delhi (for the cellular mobile telephone service the service area of Delhi includes Ghaziabad, Faridabad, Noida and Gurgaon)	Cellular		
		Basic		
		Broadband		
2	Jammu & Kashmir	Cellular		
		Basic		
		Broadband		
3	Himachal Pradesh	Cellular		
		Basic		
		Broadband		
4	Punjab	Cellular		
		Basic		
		Broadband		
5	Haryana	Cellular		
		Basic		
		Broadband		
6	Rajasthan	Cellular		
		Basic		
		Broadband		
7	Uttar Pradesh-East	Cellular		
		Basic		
		Broadband		
8	Uttar Pradesh-West(including Uttarakhand)	Cellular		
		Basic		
		Broadband		
	Total			

Zone: South zone

Sl. No.	Name of the Service Area	Services	Quotation for a year (Rupees in figures)	Quotation for a year (Rupees in words)
1	Tamilnadu (excluding Chennai)	Cellular		
		Basic		
		Broadband		
2	Andhra Pradesh	Cellular		
		Basic		
		Broadband		
3	Kerala	Cellular		
		Basic		
		Broadband		
4	Karnataka	Cellular		
		Basic		
		Broadband		
5	Chennai	Cellular		
		Basic		
		Broadband		
	Total			

Zone: West zone

Sl. No.	Name of the Service Area	Services	Quotation for a year (Rupees in figures)	Quotation for a year (Rupees in words)
1	Maharashtra (including Goa and excluding Mumbai)	Cellular		
		Basic		
		Broadband		
2	Madhya Pradesh (including Chattisgarh)	Cellular		
		Basic		
		Broadband		
3	Gujarat	Cellular		
		Basic		
		Broadband		
4	Mumbai	Cellular		
		Basic		
		Broadband		
	Total			

Zone: East zone

Sl. No.	Name of the Service Area	Services	Quotation for a year (Rupees in figures)	Quotation for a year (Rupees in words)
1	West Bengal (including Andaman & Nicobar, Sikkim and excluding Kolkata)	Cellular		
		Basic		
		Broadband		
2	North East which includes Arunachal Pradesh, Meghalaya, Mizoram, Nagaland, Manipur and Tripura.	Cellular		
		Basic		
		Broadband		
3	Orissa	Cellular		
		Basic		
		Broadband		
4	Assam	Cellular		
		Basic		
		Broadband		
5	Kolkata	Cellular		
		Basic		
		Broadband		
6	Bihar (including Jharkhand)	Cellular		
		Basic		
		Broadband		
	Total			

SECTION-IV

TECHNICAL PROPOSAL – SAMPLE FORMATS

The sample formats for the following are given in Form - 1 to 5 below.

- Form-1 Proposal submission form.
- Form-2 Audit agency's (Firm's) references- indicating past experience of the audit agency in undertaking works of similar nature as given in the Terms of Reference in Section-II.
- Form-3 Approach paper on methodology including sample audit design and work plan for performing the assignment indicating how the audit agency is equipped to perform the task, particularly their manpower and infrastructure capability.
- Form-4 Composition of the proposed key team and tasks of each team member including supervisor.
- Form-5 Curriculum Vitae of proposed professional staff.

The audit agency shall submit the documentary evidence regarding fulfilment of the eligibility conditions as per clause 4 of Section-I of tender document, including the income tax clearance/ IT Certificate and PAN Number.

Form-1

PROPOSAL SUBMISSION FORM

(To be submitted on Agency's letter head)

From

(Name and address of the agency)

To:

Joint Advisor (QOS)
Telecom Regulatory Authority of India,
Mahanagar Door Sanchar Bhawan
Jawaharlal Nehru Marg,
New Delhi-110002

Subject: Invitation of bids for undertaking audit and assessment of Quality of Service for basic telephone service (wireline); cellular mobile telephone service; and Broadband service on zonal basis (**specify the Zone**-----)

Sir,

We, the undersigned offer to provide our services for the work of audit & assessment of Quality of Service of the telecom service providers for the above subject in accordance with your tender document. We are hereby submitting our Proposal which includes both technical & financial proposals, sealed under separate envelope for the Zone (specify the Name of Zone.....) along with EMD as per the clause 3.0 of section- I of the tender document.

2. Our proposal is binding upon us and subject to the modifications resulting from contract negotiations.

3. We understand that you are not bound to accept any bid you receive.

Dated, the.....day of2015

Yours faithfully,

Witness:

Signature.....

Address.....

Authorized signatory:

Name and Title of Signatory

Tel. No.

Fax No.

E-mail address

Form-2

AUDIT AGENCY REFERENCES

**Work of similar nature carried out in the last five years
that best illustrate experience for eligibility to bid**

Using the format below, provide information on each reference assignment for which your organisation was contracted. **(Please attach a copy of the documentary evidence supporting the assignment/ experience)**

Assignment	Country
Location within Country	Professional Staff Provided by Your Firm/entity(Profiles):
Name of Client:	No. of Staff:
Address:	No. of Staff-Months; duration of assignment
Start Date (Month/Year): Completion Date(Month/Yr.): Approx. Value of Services contracted Rs.	
Name of Associated Firm, if any	No. of Months of Professional Staff, provided by Associated Firms
Name of Senior Staff (Project Director/Coordinator, Team Leader) involved and functions performed:	
Narrative Description of Project	
Description of Actual Services Provided by Your Staff:	

Authorised signatory:
Name and Title of Signatory

Form-3

**DESCRIPTION OF THE METHODOLOGY INCLUDING SAMPLE
DESIGN AND WORK PLAN FOR PERFORMING THE AUDIT AND
ASSESSMENT OF QUALITY OF SERVICE**

Authorised signatory:
Name and Title of Signatory

Form-4

**COMPOSITION OF THE TEAM PERSONNEL AND
TASK(S) OF EACH TEAM MEMBER**

1. Technical/Managerial Staff

Sl.No	Name	Position	Task
.			
1.			
2.			
3.			
4.			
..			
..			

2. Support Staff

Sl.No	Name	Position	Task
.			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
..			
..			
..			

Authorised signatory:
Name and Title of Signatory

Form-5

**FORMAT OF CURRICULUM VITAE (CV) FOR
EACH PROPOSED PROFESSIONAL STAFF**

Proposed Position: _____
Name of Firm: _____
Name of Staff: _____
Profession: _____
Date of Birth: _____
Years with Firm/Entity: _____ Nationality: _____
Membership in Professional Societies: _____
Detailed Tasks Assigned: _____

Key Qualifications:

[Give an outline of staff member's experience and training most pertinent to tasks on assignment. Describe degree of responsibility held by staff member on relevant previous assignment and give dates and locations. Use about half a page.]

Education:

[Summarize college/university and other specialized education of staff member, giving names of schools, dates attended, and degrees obtained. Use about one quarter of page]

Employment Record:

[Starting with present position, list reverse order every employment held. List all positions held by staff member in last 10 years, giving dates, names of employing organizations, titles of positions held, and locations of assignment. Also give types of activities performed and client references, where appropriate. Use about three-quarters of a page].

Languages:

[For each language indicate proficiency: excellent, good fair, or poor; in speaking, reading and writing]

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.

[Signature of staff member] Date: _____

Authorised signatory:
Name and Title of Signatory

PERFORMANCE BANK GUARANTEE

(To be stamped in accordance with the Stamp Act)

To

The Secretary,
Telecom Regulatory Authority of India,
Mahanagar Door Sanchar Bhawan,
Jawahar Lal Nehru Marg
New Delhi - 110002.

WHEREAS ----- (Name and address of the firm) (hereinafter called "the Audit Agency") has undertaken, in pursuance of agreement No.----- dated ----- (hereinafter called "the Agreement") to conduct audit and assessment of Quality of Service provided by the telecom service providers;

AND WHEREAS it has been stipulated by you in the said Agreement that the Audit Agency shall furnish you with a Bank Guarantee from a scheduled Bank in India for the sum specified herein as security for compliance with his obligations in accordance with the Agreement;

AND WHEREAS we (Insert name and address of Bank) have agreed to give the Audit Agency such a Bank Guarantee;

NOW THEREFORE we (Insert name of Bank) hereby affirm that we are the Guarantors and responsible to you, on behalf of the Audit Agency up to a total of ----- (amount of Guarantee)----- (in words and figures), and we hereby unconditionally, irrevocably and without demur undertake to immediately pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of ----- (amounts of guarantee) as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We (Insert name of Bank) hereby waive the necessity of your demanding the said debt from the Audit Agency before presenting us with the demand.

We (Insert name of Bank) further agree that no change or addition to or other modification of the terms of the Agreement or of the works to be performed thereunder or of any of the contract documents which may be made between you and the Audit Agency shall in any way release us from any liability under the guarantee

and we hereby waive notice of any such change, addition or modification.

We (Insert name of Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the assignment under the Agreement and that it shall continue to be enforceable till all the dues of TRAI, by virtue of the said Agreement have been fully paid and its claims satisfied or discharged and till TRAI, accordingly, discharges this guarantee.

We (Insert name of Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the TRAI in writing.

This guarantee shall be valid upto and including the day of
The pendency of any dispute or arbitration or other proceedings shall not affect this guarantee in any manner.

Dated, the.....day of2015

SIGNATURE AND SEAL OF THE
AUTHORISED OFFICER OF THE BANK

Name & Designation of the Officer-----

NAME OF BANK -----

ADDRESS -----

DATE -----

Note: The stamp papers of appropriate value shall be purchased in the name of the Bank, who issues the 'Bank Guarantee'.

DETAILS OF ZONE WISE SERVICE AREA**NORTH ZONE**

Sl	Licensed Service Area and category		Areas covered	Name of licensees (Service Provider)	Subscriber base as on 31 st December 2014	
					Mobile	Basic Wireline
01.	Jammu & Kashmir	C	Entire area falling within the State of Jammu & Kashmir including the autonomous council of Ladakh.	BSNL	1236863	156472
				Bharti Airtel Limited	2885273	
				Aircel	2491798	
				Reliance Comm.	749221	
				Vodafone	105980	
				IDEA Cellular	466419	
02.	Himachal Pradesh	C	Entire area falling within the State of Himachal Pradesh	Bharti Airtel Limited	2384219	
				IDEA Cellular	674632	
				Reliance Telecom	1352680	
				BSNL	1437942	221676
				Aircel	907274	
				Tata teleservices	107689	2885
				Reliance Comm.	173011	4847
				Vodafone	587941	90
03.	Rajasthan	B	Entire area falling within the State of Rajasthan.	Vodafone	10517333	1710
				BSNL	3461435	722587
				IDEA Cellular	6525030	
				Bharti Airtel Limited	16900399	39951
				Reliance Comm.	6232758	23434
				Tata teleservices	1832552	9946
				Sistema Shyam Teleservices Ltd	2213549	54954
				Aircel	5448995	
04.	Punjab	B	Entire area falling within the State of Punjab and Union territory of Chandigarh.	Spice Comm.(Idea)	6091118	
				Quadrant (HFCL)	2511405	224975
				Bharti Airtel Limited	7634179	92474
				Vodafone	4823485	510
				BSNL	3188732	794702
				Reliance Comm	3086923	20565
				Tata teleservices	2618636	16990
				Aircel	967167	

05.	Haryana	B	Entire area falling within the State of Haryana except the local areas served by Faridabad and Gurgaon Telephone exchanges.	IDEA Cellular	4428358	
				Vodafone	5061184	90
				BSNL	3067868	377796
				Bharti Airtel Limited	2529358	16521
				Reliance Comm	2008447	4916
				Tata teleservices	2808972	32960
				Aircel	3092	
06.	Delhi	Met ro	Local Areas served by Delhi, Ghaziabad, Faridabad, Noida, and Gurgaon Telephone Exchanges	Videocon	1839772	
				Bharti Airtel Limited	10877042	1197003
				Vodafone	9468453	20490
				MTNL	2325730	1605117
				IDEA Cellular	5906714	
				Tata teleservices	2836590	119194
				Reliance Comm	8207377	181262
07.	Uttar Pradesh - East	B	Entire area covered by Eastern Uttar Pradesh with the following as its boundary districts towards Western Uttar Pradesh: Shahjahanpur, Farrukhabad, Kanpur and Jalaun.	Aircel	4713338	
				Sistema Shyam Teleservices Ltd	1019213	
				Bharti Airtel Limited	17793314	55108
				Vodafone	16903807	1020
				IDEA Cellular	8750797	
				BSNL	8039027	415224
				Reliance Comm.	7922174	38656
08.	Uttar Pradesh- West	B	Entire area covered by Western Uttar Pradesh with the following as its boundary districts towards Eastern Uttar Pradesh: Pilibhit, Bareilly, Badaun, Etah, Mainpuri and Etawah. It will exclude the local	Tata teleservices	4576024	15845
				Aircel	6007873	
				Telewings	10144872	
				Vodafone	10424299	390
				IDEA Cellular	12535987	
				BSNL- UP(w)	3438380	289627
				BSNL - Uttranchal		116957
				Bharti Airtel Limited	7203729	20098
				Reliance Comm	5167290	6274
				Tata teleservices	3848265	9815
				Aircel	164141	
				Sistema Shyam Teleservices Ltd	194565	

		telephone area of Ghaziabad and Noida. However, it will also include the newly created State of Uttarakhand pursuant to the Uttar Pradesh Re-organisation Act, 2000 (No.29 of 2000) dated 25 th August, 2000.	Telewings	7565979	
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SOUTH ZONE

Sl	Licensed Service Area and category		Areas covered	Name of licensees (Service Provider)	Subscriber base as on 31 st December 2014	
					Mobile	Basic Wireline
01.	Andhra Pradesh	A	Entire area falling within the State of Andhra Pradesh including the state Telangna).	IDEA Cellular	13646780	
				Bharti Airtel	21035524	119039
				BSNL	9931560	1543551
				Vodafone	6914336	8790
				RCOM	5011972	81569
				Aircel	2349727	
				Tata Teleservices	6369411	162478
				Telewings	5398219	
02.	Karnataka	A	Entire area falling within the States of Karnataka	Bharti Airtel Limited	18359667	527281
				BSNL	6720017	1428963
				Vodafone	7607837	6450
				Sistema Shyam	1627632	-
				RCOM	5232449	128613
				Aircel	2923297	-
				IDEA Cellular	7803337	-
				Tata Teleservices	6894931	175894
03.	KERALA	B	Entire area falling within the State of Kerala and Union Territory of Lakshadweep and Minicoy	IDEA Cellular	9494734	-
				Vodafone	7058734	570
				BSNL	6745205	2580135
				Bharti Airtel	3959875	49204
				Tata Teleservices	1721790	14631
				RCOM	1756309	37301
				Sistema Shyam	396432	-
				Aircel	918	-

04.	Tamilnadu (incl Chennai)	A	Entire area falling within the State of Tamilnadu and Union Territory of Pondichery excluding the areas covered by Service area	Vodafone	13961596	6330
				Aircel	23620644	-
				IDEA Cellular	3984325	-
				BSNL	9855055	2098991
				Bharti Airtel	15341821	459858
				RCOM	6093974	143863
				Sistema Shyam	936486	-
				Tata Teleservices	5965594	90600

WEST ZONE

Sl	Licensed Service Area and category		Areas covered	Name of licensees (Service Provider)	Subscriber base as on 31 st December 2014	
					Mobile	Basic Wireless
01.	Maha-rashtra	A	Entire area falling within the State of Maharashtra and Union Territory of Goa, excluding areas covered by Mumbai Metro Service Area.	Vodafone	16894186	9360
				IDEA Cellular	21101531	
				BSNL	5191489	1730570
				Bharti Airtel Limited	10983519	66655
				Reliance Comm	4967266	81756
				Tata teleservices	6637496	269800
				Aircel	1749377	
				Telewings	7241912	
02.	Mumbai	Metro	Local Areas served by Mumbai, New Mumbai and Kalyan Telephone Exchanges	Vodafone	8348017	11520
				MTNL	1124939	1916447
				Bharti Airtel Limited	4997718	348587
				Reliance Comm	5748946	237094
				Tata teleservices	3627338	525642
				IDEA Cellular	3898068	
				Aircel	2309076	
03.	Gujarat	A	Entire area falling within the State of Gujarat and Union Territory of Daman and Diu, Silvassa (Dadra & Nagar Haveli).	Vodafone	18457632	2250
				IDEA Cellular	10605791	
				BSNL	3173174	1342812
				Bharti Airtel Limited	7789314	60479
				Reliance Comm	4394383	82293
				Tata teleservices	3214038	80859
				Aircel	18563	
				Telewings	6762644	
				Videocon	2185886	
				Sistema Shyam Teleservices Ltd	194843	

04.	Madhya Pradesh	B	Entire area falling within the re-organised State of Madhya Pradesh as well as the newly created State of Chattisgarh pursuant to the Madhya Pradesh Reorganisation Act, 2000 (No:28 of 2000) dated 25 th August, 2000.	IDEA Cellular	18862565	
				Reliance Telecom	10105955	
				BSNL - MP	2833287	691103
				BSNL - Chattisgarh		138147
				Bharti Airtel Limited	11084420	229809
				Reliance Comm	2059127	22597
				Tata teleservices	4755347	18882
				Videocon	2426766	
				Aircel	22694	
				Vodafone	5726055	270

EAST ZONE

Sl	Licensed Service Area and category	Areas covered	Name of licensees (Service Provider)	Subscriber base as on 31 st December 2014	
				Mobile	asic Wireless
01.	Assam	C	Entire area falling within the State of Assam.	Bharti Airtel Limited	4879060
				BSNL	1276828
				Aircel	4231441
				Reliance Telecom	2256672
				Vodafone	3060613
				IDEA Cellular	728824
02.	North East	C	Entire area falling within the States of Arunachal Pradesh, Meghalaya, Mizoram, Nagaland, Manipur and Tripura.	BSNL	3312390
				Bharti Airtel Limited	274044
				Reliance Telecom	841141
				Aircel	2863557
				Vodafone	1280728
				IDEA Cellular	428926
03.	West Bengal and Andaman & Nicobar	B	Entire area falling within the Union Territory of Andaman & Nicobar Islands and area falling within the State of West Bengal and the State of Sikkim excluding the areas covered by Kolkata Metro Service Area.	Sistema Shyam Teleservices Ltd	1753263
				Bharti Airtel Limited	11353704
				Reliance Telecom	5865671
				BSNL - WB	1948531
				BSNL - A&N	
				Tata teleservices	884998
				Vodafone	14316992
				Aircel	4661966
				IDEA Cellular	3874282
				Reliance Comm.	853918

04.	Bihar & Jharkhand	C	Entire area falling within the re-organised State of Bihar and newly created State of Jharkhand pursuant to the Bihar Reorganisation Act, 2000 (No.30 of 2000) dated 25 th August, 2000.	Reliance Telecom	6158118	
				Reliance Comm	2587492	6100
				BSNL - Bihar	2939455	203695
				BSNL Jharkhand		150944
				IDEA Cellular	7764446	
				Bharti Airtel Limited	23260424	
				Tata teleservices	2338168	12228
				Telewings	6574110	
				Vodafone	7880695	780
				Aircel	5674192	
05.	Orissa	C	Entire area falling within the State of Orissa.	Reliance Telecom	3615669	
				Reliance comm.	300984	2952
				BSNL	3451231	324412
				Bharti Airtel Limited	8601791	
				Vodafone	3583658	570
				Tata teleservices	2326360	7800
				IDEA Cellular	1327635	
				Aircel	3909753	
06.	Kolkata	Met ro	Local Areas served by Calcutta Telephones.	Bharti Airtel Limited	4048302	106355
				Vodafone	4747270	3180
				BSNL	802446	785053
				Reliance Telecom	2519573	
				IDEA Cellular	1635759	
				Aircel	3634662	
				Tata teleservices	2902369	44839
				Sistema Shyam Teleservices Ltd.	644162	
				Reliance Comm	1024836	80650

Broadband Subscriber Base

S.No.	ISPs	Service Areas	Dec'14
1	Bharat Sanchar Nigam Ltd.	All India (except Delhi, Mumbai)	9977290
2	Mahanagar Telephone Nigam Ltd.	Delhi, Mumbai	1134994
3	Bharti Airtel Ltd.	All India	1411021
4	Atria Convergence Technologies Pvt. Ltd	All India	611050
5	You Broadband India Ovt. Ltd	All India	424771
6	Hathway Cable & Datacom Pvt. Ltd.	All India	311946
7	Quadrant Televentures Ltd. (HFCL Infotel Ltd)	Punjab	137140
8	Asisnet Satellite Communications Ltd	Kerala	134598
9	Reliance Comm. Ltd.	All India	104565
10	Syscon Infoway Pvt. Ltd	Maharashtra & Mumbai	103690
11	D-Vois Broadband Private Limited	All India	70471
12	GTPL Hathway Pritvate Limited (Gujarat Teleink Pvt. Ltd.)	Gujarat	68880
13	Tata Teleservices (Maharashtra) Ltd	Maharashtra & Goa	61870
14	Five Network (Solution (India) Ltd	All India	61829
15	Alliance Broadband Services Pvt. Ltd.	Kolkata	61003
16	Broadband Pacenet (I) Pvt. Ltd.	All India	51761
17	Ortel Communication Ltd	AP, Kolkata, MP, Orissa	49705
18	Citycom Networks Pvt. Ltd.	All India	37603
19	Tata Teleservices Ltd	All India	34601
20	Honesty Net Solutions (I) Pvt. Ltd	All India	31881
21	Tata Communications Ltd	All India	31376
22	Siti CableNetwork Ltd. (Wire and Wireless India Ltd.)	All India	27120
23	Digital Network associates Pvt. Ltd.	Maharashtra & Goa	26610
24	Indusind Media & Communications Limited (in2cable (I) Ltd.	All India	26170
25	Home Systems Pvt. Ltd	Mumbai	24398
26	Wish Net Pvt. Ltd	WB & Kolkata	19343

27	Vasai Cable Pvt. Ltd	Mumbai	18470
28	DEN Networks Ltd	All India	15649
29	Rajesh Multi Channel Pvt. Ltd.	Mumbai	14588
30	R.K. Infratel Limited	Gujarat	14483
31	Nextra Teleservices Pvt. Ltd	Delhi	14247
32	Railtel Corporation of India Ltd	All India	13720
33	Noida Software Technology Park Ltd	All India	13537
34	Smartlink Broadband Services	Mumbai	12238
35	North East Dataa Network Pvt Ltd.	Karnataka	11052
36	Meghbela Cable & Broadband Services (P) Ltd	WB & Kolkata	11015
37	Southern Oline Bio Technologies Ltd	AP	10937
38	Pioneerelabs	Telangana (AP)	10749

Annexure – 2C

No. of Telephone Exchanges (Wireline) Service Area/Circle wise as on September'14

Service Provider	Zone	Name of the Circle/Service Area	No. of Wire line Telephone Exchanges		
			Urban	Rural	Total
North Zone					
MTNL	N	Delhi	326	0	326
Bharti	N	Delhi(NCR)	8	0	8
TTL	N	Delhi	3	0	3
RCL	N	Delhi	2	0	2
Vodafone	N	Delhi	6	0	6
Total (DEL)			345	0	345
BSNL	N	Haryana	244	793	1037
Bharti	N	Haryana	1	0	1
TTL	N	Haryana	5	0	5
RCL	N	Haryana	1	0	1
Vodafone	N	Haryana	1	0	1
Total (HR)			252	793	1045
BSNL	N	Himachal Pradesh	126	983	1109
TTL	N	Himachal Pradesh	1	0	1
RCL	N	Himachal Pradesh	1	0	1
Vodafone	N	Himachal Pradesh	1	0	1
Total (HP)			129	983	1112
BSNL	N	J&K	111	260	371
Total (J&K)			111	260	371
BSNL	N	Punjab	290	1205	1495
Bharti	N	Punjab	2	0	2
Quadrant	N	Punjab	5	0	5
TTL	N	Punjab	1	0	1
RCL	N	Punjab	1	0	1
Vodafone	N	Punjab	1	0	1
Total (PB)			300	1205	1505
BSNL	N	Rajasthan	395	1747	2142
Bharti	N	Rajasthan	1	0	1
Sistema	N	Rajasthan	3	0	3
TTL	N	Rajasthan	6	0	6
RCL	N	Rajasthan	1	0	1
Vodafone	N	Rajasthan	1	0	1
Total (RAJ)			407	1747	2154
BSNL	N	UP(East)	578	1553	2131
Bharti	N	UP(East)	1	0	1
TTL	N	UP(East)	5	0	5
RCL	N	UP(East)	1	0	1
Vodafone	N	UP(East)	1	0	1
Total (UPE)			586	1553	2139
BSNL	N	UP(West) & Uttarkhand	612	832	1444
Bharti	N	UP(West) & Uttarkhand	1	0	1
TTL	N	UP(West) & Uttarkhand	1	0	1

RCL	N	UP(West) & Uttarkhand	1	0	1
Vodafone	N	UP(West) & Uttarkhand	4	0	4
Total (UPW)			619	832	1451
Total North Zone			2749	7373	10122
South Zone					0
BSNL	S	Andhra Pradesh	614	2590	3204
Bharti	S	Andhra Pradesh	1	0	1
TTL	S	Andhra Pradesh	5	0	5
Vodafone	S	Andhra Pradesh	2	0	2
RCL	S	Andhra Pradesh	2	0	2
Total (AP)			624	2590	3214
BSNL	S	Chennai	250	80	330
RCL	S	Chennai	1	0	1
Vodafone	S	Chennai	1	0	1
Total (CHN)			252	80	332
BSNL	S	Karnataka	583	2217	2800
Bharti	S	Karnataka	4	0	4
TTL	S	Karnataka	3	0	3
RCL	S	Karnataka	1	0	1
Vodafone	S	Karnataka	2	0	2
Total (KTK)			593	2217	2810
BSNL	S	Kerala	261	1025	1286
Bharti	S	Kerala	1	0	1
TTL	S	Kerala	1	0	1
RCL	S	Kerala	1	0	1
Vodafone	S	Kerala	1	0	1
Total (KER)			265	1025	1290
BSNL	S	Tamil Nadu	813	1190	2003
RCL	S	Tamilnadu	1	0	1
Bharti	S	Tamilnadu	5	0	5
TTL	S	Tamilnadu (included Chennai)	10	0	10
Vodafone	S	Tamilnadu	1	0	1
Total (TN)			830	1190	2020
Total South Zone			2564	7102	9666
WEST ZONE					0
BSNL	W	Chattisgarh	224	335	559
Total (CG)			224	335	559
BSNL	W	Gujarat	519	1956	2475
Bharti	W	Gujarat	1	0	1
TTL	W	Gujarat	1	0	1
RCL	W	Gujarat	2	0	2
Vodafone	w	Gujarat	1	0	1
Total (GJ)			524	1956	2480
BSNL	W	Madhya Pradesh	642	1792	2434
Bharti	W	Madhya Pradesh & Chattisgarh	5	0	5
TTL	W	Madhya Pradesh & Chattisgarh	1	0	1
RCL	W	Madhya Pradesh	1	0	1
Vodafone	W	Madhya Pradesh	1	0	1

Total (MP)			650	1792	2442
Bharti	W	Maharashtra	1	0	1
RCL	W	Maharashtra & Goa	2	0	2
TTL	W	Maharashtra	3	0	3
BSNL	W	Maharashtra	681	3977	4658
Vodafone	w	Maharashtra & Goa	2	0	2
Total (MH)			689	3977	4666
MTNL	W	Mumbai	238	0	238
Bharti	W	Mumbai	2	0	2
TTL	W	Mumbai	6	0	6
RCL	W	Mumbai	2	0	2
Vodafone		Mumbai	4	0	4
Total(MUM)			252	0	252
Total West Zone			2339	8060	10399
EAST ZONE					0
BSNL	E	A & N	6	44	50
Total (A&N)			6	44	50
BSNL	E	Assam	169	408	577
Vodafone	E	Assam	1	0	1
Total (ASM)			170	408	578
BSNL	E	Bihar	234	959	1193
TTL	E	Bihar	1	0	1
RCL	E	Bihar	1	0	1
Vodafone	E	Bihar	2	0	2
Total (BH)			238	959	1197
BSNL	E	Jharkhand	193	297	490
Total (JHR)			193	297	490
BSNL	E	Kolkata	510	0	510
Bharti	E	Kolkata	1	0	1
TTL	E	Kolkata	1	0	1
RCL	E	Kolkata	1	0	1
Vodafone	E	Kolkata	1	0	1
Total (Kolkata)			514	0	514
BSNL	E	North East-I	71	130	201
BSNL	E	North East-II	65	155	220
TTL	E	North East	1	0	1
Total (NE-I & II)			137	285	422
BSNL	E	Orissa	257	811	1068
TTL	E	Orissa	1	0	1
RCL	E	Orissa	1	0	1
Vodafone	E	Orissa	1	0	1
Total (OR)			260	811	1071
BSNL	E	West Bengal	237	1128	1365
RCL	E	West Bengal	1	0	1
Vodafone	E	West Bengal	1	0	1
Total (WB)			239	1128	1367
Total East Zone			1757	3932	5689
Total All Zones			9409	26467	35876

Annexure-2D

List of No. of Mobile Switching Centres (MSC) as on 30 th Sept. 2014 and BTS' as on 31 st Dec., 2014						
Sl. No.	Name of service provider	Service Area	No. of MSCs	Number of BTS		
	NORTH ZONE			2G	3G	CDMA
1	Bharti Airtel Ltd	Delhi	31	5713	5261	
2	Vodafone Essar Mobile Services Ltd	Delhi	16	6003	5543	
3	MTNL	Delhi	4	1122	762	
4	IDEA Cellular Ltd	Delhi	10	4690		
5	Aircel	Delhi	3	3359		
6	MTNL	Delhi	2			210
7	Reliance Infocomm Ltd	Delhi	10	2269	2072	984
8	Tata Teleservices Ltd	Delhi	13			1500
9	Sistema Shyam	Delhi	1			1008
10	IDEA Cellular Ltd	Punjab	9	4780	1941	
11	Bharti Airtel Ltd	Punjab	25	5237		
12	BSNL	Punjab	16	3227	1382	245
13	Vodafone Essar South Ltd	Punjab	20	4826		
14	Dishnet wireless Ltd	Punjab	1	599	306	
15	Reliance Infocomm Ltd	Punjab	4	1538	873	625
16	Tata Teleservices Ltd	Punjab	5	1641	462	559
17	HFCL	Punjab	3	2160		13
18	IDEA Cellular Ltd	Haryana	5	3171	1231	
19	Vodafone Essar India Ltd	Haryana	7	2885	1077	
20	BSNL	Haryana	10	2003	818	249
21	Bharti Airtel Ltd	Haryana	4	2495		
22	Dishnet wireless Ltd	Haryana	1	28		
23	Videocon	Haryana	1	1357		
24	Reliance Infocomm Ltd	Haryana	3	901		552
25	Tata Teleservices Ltd	Haryana	6	1490	820	417
26	IDEA Cellular Ltd	UP (W)	17	7661	2453	
27	Bharti Airtel Ltd	UP (W)	19	6576	2563	
28	BSNL	UP (W)	21	3346	1459	477
29	Vodafone Essar South Ltd	UP (W)	38	6424		
30	Dishnet wireless Ltd	UP (W)	2	637		
31	Telewings	UP (W)	12	3923		
32	Reliance Infocomm Ltd	UP (W)	11	1727		1035
33	Sistema Shyam	UP (W)	1			337
34	Tata Teleservices Ltd	UP (W)	7	1830	712	638
35	Vodafone Essar India Ltd	UP (E)	54	9731	1989	
36	Bharti Airtel Ltd	UP (E)	41	9877		
37	BSNL	UP (E)	29	5350	1215	418
38	IDEA Cellular Ltd	UP(E)	10	7291	1918	

39	Dishnet wireless Ltd	UP(E)	2	3382	983	
40	Telewings	UP(E)	12	4822		
41	Reliance Infocomm Ltd	UP(E)	14	2106		1152
42	Tata Teleservices Ltd	UP (E)	8	2352		471
43	Vodafone Essar India Ltd	Rajasthan	12	7012		
44	Bharti Hexacom Ltd	Rajasthan	43	8000	2918	
45	BSNL	Rajasthan	38	3991	1255	815
46	IDEA Cellular Ltd	Rajasthan	11	6094		
47	Dishnet wireless Ltd	Rajasthan	1	1846	5	
48	Reliance Infocomm Ltd	Rajasthan	9	2927	701	1648
49	Tata Teleservices Ltd	Rajasthan	9	1396		693
50	Sistema Shyam	Rajasthan	2			16332
51	Bharti Airtel Ltd	HP	5	1440	622	
52	Reliance Telecom Ltd	HP	2	752	171	
53	BSNL	HP	6	1158	261	345
54	IDEA Cellular Ltd	HP	2	940	292	
55	Dishnet wireless Ltd	HP	1	662		
56	Vodafone	HP	1	790		
57	Reliance Infocomm Ltd	HP	1			282
58	Tata Teleservices Ltd	HP	2	5		131
59	BSNL	J & K	10	1189	427	305
60	Bharti Airtel Ltd	J & K	10	2765	858	
61	Dishnet wireless Ltd	J & K	6	2125	401	
62	Vodafone	J & K	2	1505		
63	IDEA Cellular Ltd	J & K	2	906	297	
64	Reliance Infocomm Ltd	J & K	3	866	457	27
Total North Zone			687	184898	44505	18183
	SOUTH ZONE					
1	IDEA Cellular Ltd	AP	16	9527	3359	
2	Bharti Airtel Ltd	AP	43	11906	5497	
3	BSNL	AP	20	7279	3071	1014
4	Vodafone Essar South Ltd	AP	7	8686		
5	Aircel	AP	2	1984	1281	
6	Telewings	AP	5	3301		
7	Reliance Infocomm Ltd	AP	10	3141		1725
8	Tata Teleservices Ltd	AP	13	4693		1293
9	Bharti Airtel Ltd	Karnataka	58	10651		6232
10	IDEA Cellular Ltd	Karnataka	10	7369		
11	BSNL	Karnataka	10	5577	1421	712
12	Vodafone Essar South Ltd	Karnataka	7	9231		
13	Aircel	Karnataka	2	2338	1470	
14	Reliance Infocomm Ltd	Karnataka	11	2855		1403
15	Tata Teleservices Ltd	Karnataka	13	5678	2954	956
16	Sistema Shyam	Karnataka	2			1186

17	Vodafone Essar Cellular Ltd	TN incl. Chennai	17	10405	5311	
18	Aircel Ltd	TN incl. Chennai	51	8443	2536	
19	BSNL	TN incl. Chennai	19	7689	2298	763
20	Bharti Airtel Ltd	TN incl. Chennai	36	12542	8164	
21	IDEA Cellular Ltd	TN incl. Chennai	2	4725		
22	Reliance Infocomm Ltd	TN incl. Chennai	13	3542		1831
23	Sistema Shyam	TN incl. Chennai	2			1265
24	Tata Teleservices Ltd	TN incl. Chennai	8	5170		911
25	IDEA Cellular Ltd	Kerala	13	6325	4542	
26	Vodafone Essar Cellular Ltd	Kerala	10	5268		
27	BSNL	Kerala	26	5249	1687	1185
28	Bharti Airtel Ltd	Kerala	11	5419		
29	Dishnet wireless Ltd	Kerala	1	81	4	
30	Reliance Infocomm Ltd	Kerala	7	1575		959
31	Sistema Shyam	Kerala	1			669
32	Tata Teleservices Ltd	Kerala	4	2194	438	444
Total South Zone			450	172753	50265	16316
	WEST ZONE					
1	Vodafone Essar Ltd	Mumbai	21	4463	4473	
2	MTNL	Mumbai	5	992	709	
3	Bharti Airtel Ltd	Mumbai	14	3875	3506	
4	IDEA Cellular Ltd	Mumbai	8	3341		
5	Aircel	Mumbai	2	1811		
7	MTNL	Mumbai	2			146
8	Reliance Infocomm Ltd	Mumbai	10	2241	1964	862
9	Tata Teleservices (Maharashtra) Ltd	Mumbai	9	2904		947
10	Vodafone Essar Cellular Ltd	Maharashtra	10	10173	4248	
11	IDEA Cellular Ltd	Maharashtra	42	10616	5160	
12	BSNL	Maharashtra	21	7057	2226	1099
13	Bharti Airtel Ltd	Maharashtra	23	10550		
14	Aircel	Maharashtra	3	1781		
15	Telewings	Maharashtra	8	4490		
16	Reliance Infocomm Ltd	Maharashtra	13	3776		2371
17	Tata Teleservices Ltd	Maharashtra	14	4392	1941	2282
18	Vodafone Essar Gujarat Ltd	Gujarat	20	7937	4121	
19	IDEA Cellular Ltd	Gujarat	21	6584	3783	
20	BSNL	Gujarat	11	4371	1984	519
21	Bharti Airtel Ltd	Gujarat	17	7349		

22	Telewings	Gujarat	7	3779		
23	Videocon	Gujarat	2	1960		
24	Dishnet wireless Ltd	Gujarat	1	826		
25	Reliance Infocomm Ltd	Gujarat	15	2534		1109
26	Sistema Shyam	Gujarat	1			576
27	Tata Teleservices Ltd	Gujarat	10	2156	1314	715
28	IDEA Cellular Ltd	MP	33	9667	2768	
29	Reliance Telecom Ltd	MP	13	3959		
30	BSNL	MP	14	5446	1210	1074
31	Bharti Airtel Ltd	MP	16	9324		
32	Vodafone	MP	4	5409		
33	Dishnet wireless Ltd	MP	1	128		
34	Videocon	MP	1	1569		
35	Reliance Infocomm Ltd	MP	11		947	1808
36	Tata Teleservices Ltd	MP	7	2890	1032	447
	Total West Zone		410	148350	41386	13955
	EAST ZONE					
1	Bharti Airtel Ltd	Kolkata	8	2289		
2	Vodafone Essar East Limited	Kolkata	8	2490	2098	
3	BSNL	Kolkata	8	1213	729	276
4	Reliance Telecom Ltd	Kolkata	4	1639	1342	
5	Dishnet wireless Ltd	Kolkata	2	2100	1178	
6	IDEA Cellular Ltd	Kolkata	2	1939		
7	Reliance Infocomm Ltd	Kolkata	2			480
8	Sistema Shyam	Kolkata	1			558
9	Tata Teleservices Ltd	Kolkata	6	1741		584
10	Reliance Telecom Ltd	WB	6	2506	405	
11	BSNL	WB	14	2548	640	424
12	Bharti Airtel Ltd	WB	33	5941	1857	
13	Vodafone Essar South Ltd	WB	19	7211	1195	
14	Dishnet wireless Ltd	WB	3	2706	321	
15	IDEA Cellular Ltd	WB	3	3603		
16	Reliance Infocomm Ltd	WB	6			813
17	Sistema Shyam	WB	2			910
18	Tata Teleservices Ltd	WB	4	256		26
19	Reliance Telecom Ltd	Bihar	10	3371	633	
20	BSNL	Bihar	25	3753	1456	559
21	Bharti Airtel Ltd	Bihar	52	9129	2837	
22	Dishnet wireless Ltd	Bihar	8	2824	506	
23	Vodafone	Bihar	6	8253		
24	IDEA Cellular Ltd	Bihar	18	6795		
25	Telewings	Bihar	7	3234		
26	Reliance Infocomm Ltd	Bihar	12			1543
27	Tata Teleservices Ltd	Bihar	7	963		408

28	Reliance Telecom Ltd	Orissa	4	1865	489	
29	BSNL	Orissa	11	2452	948	283
30	Bharti Airtel Ltd	Orissa	13	4746		
31	Dishnet Wireless Ltd	Orissa	8	2613	431	
32	Vodafone Essar Spectel Limited	Orissa	3	3701		
33	IDEA Cellular Ltd	Orissa	1	1881		
34	Reliance Infocomm Ltd	Orissa	4			475
35	Tata Teleservices Ltd	Orissa	3	1418		345
36	Reliance Telecom Ltd	Assam	4	1569	334	
37	BSNL	Assam	9	1344	695	79
38	Bharti Airtel Ltd	Assam	10	3259	1207	
39	Dishnet Wireless Ltd	Assam	9	2546	318	
40	Vodafone Essar Spectel Limited	Assam	2	2882		
41	IDEA Cellular Ltd	Assam	1	1212		
42	Reliance Telecom Ltd	NE	2	605	153	
43	Bharti Hexacom Ltd	NE	7	1961	698	
44	BSNL	NE	14	1280	427	390
45	Dishnet Wireless Ltd	NE	7	1755	241	
46	Vodafone Essar Spectel Limited	NE	1	1505		
47	IDEA Cellular Ltd	NE	1	739		
Total East Zone			390	115880	21138	8153
Total All Zone			1937	621881	157294	55192

List of level -1s

(This list is not exhaustive and additional level 1s also needs to be verified as per the direction of TRAI)

1	100	Police
2	101	Fire
3	102	Ambulance
4	104	Health Information Helpline
5	108	Emergency and Disaster Management Helpline
6	138	All India Helpline for Passangers
7	149	Public Road Transport Utility Service
8	181	Chief Minister Helpline
9	182	Indian Railway Security Helpline
10	1033	Road Accident Management Service
11	1037	Public Grievance Cell DoT Hq as 'Telecom Consumer Grievance Redressal Helpline'
12	1056	Emergency Medical Services
13	106X	State of the Art Hospitals
14	1063	Public Grievance Cell DoT Hq
15	1064	Anti Corruption Helpline
16	1070	Relief Commission for Natural Calamities
17	1071	Air Accident Helpline
18	1072	Rail Accident Helpline
19	1073	Road Accident Helpline
22	1077	Control Room for District Collector
25	1090	Call Alart (Crime Branch)
26	1091	Women Helpline
27	1097	National AIDS Helpline to NACO
28	1099	Central Accident and Trauma Services (CATS)
29	10580	Educational& Vocational Guidance and Counselling
30	10589	Mother and Child Tracking (MCTH)
31	10740	Central Pollution Control Board
32	10741	Pollution Control Board
33	1511	Police Related Service for all Metro Railway Project
34	1512	Prevention of Crime in Railway
35	1514	National Career Service(NCS)
36	15100	Free Legal Service Helpline

37	155304	Municipal Corporations
38	155214	Labour Helpline
39	1903	Sashastra Seema Bal (SSB)
40	1909	National Do Not Call Registry
41	1912	Complaint of Electricity
42	1916	Drinking Water Supply
43	1950	Election Commission of India

	Service Area	Total SSAs	Difficult SSAs
East	AN	1	
	Assam	7	
	Bihar	18	2
	NE	6	6
	Orissa	12	1
	West Bengal	14	1
	Total	58	10
North	Haryana	8	
	HP	6	
	JK	5	
	Delhi	1	1
	Punjab	11	
	Rajasthan	24	3
	UPE	32	
	UPW	19	
	Total	106	4
South	AP	22	
	Kerala	11	
	Karnataka	19	
	TamilNadu	18	1
	Total	70	5
West	Mumbai	1	1
	Gujarat	17	
	Maharashtra	30	2
	MP	40	5
	Total	88	8

PRE-CONTRACT INTEGRITY PACT

General

This pre-bid pre-contract Agreement (hereinafter called the Integrity Pact) is made on _____ day of the month of _____ 2015, between, the Telecom Regulatory Authority of India, Mahanagar Doorsanchar Bhawan, Jawaharlal Nehru Marg (Old Minto Road), New Delhi – 110002, hereinafter called the AUTHORITY acting through Joint Advisor (QoS), which expression shall mean and include, unless the context otherwise requires, his successors in office and assigns) of the First Part and M/s. _____ represented by Shri _____, Chief Executive Officer (hereinafter called the "BIDDER" which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second Part.

WHEREAS the AUTHORITY proposes to get the work for Audit and assessment of telecom service and the BIDDER is willing to offer/has offered its services for conducting Audit and assessment of quality of service provided by the telecom service providers in terms of the benchmarks specified in the "Standards of Quality of Service of Basic Telephone Service (Wire line) and Cellular Mobile Telephone Service Regulations, 2009 (7 of 2009) dated 20th March, 2009, the "Standards of Quality of Service for Wireless Data Services Regulations, 2012 dated 4th December 2012 (26 of 2012) and the "Quality of Service of Broadband Service Regulations", 2006 (11 of 2006) dated 6th October, 2006

WHEREAS the BIDDER is a private company/public company/Government undertaking/partnership, constituted in accordance with the relevant law in the matter and the AUTHORITY is an Autonomous organisation under the Government of India.

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:-

- Enabling the AUTHORITY to obtain desired services at a competitive price in conformity with defined specifications avoiding high cost and distortionary impact of corruption on public services, and
- Enabling BIDDERS to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain

from bribing and other corrupt practices and the Authority will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

Commitments of the AUTHORITY

1.1 The AUTHORITY undertakes that no official of the AUTHORITY, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.

1.2 The AUTHORITY will, during the pre-contract stage, treat all BIDDERS alike, and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERS.

1.3 All the officials of the AUTHORITY will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

2. In case of any such preceding misconduct on the part of an official(s) is reported by the BIDDER to the AUTHORITY with full and verifiable facts and the same is *prima facie* found to be correct by the BUYER, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the Authority and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the BUYER the proceedings under the contract would not be stalled.

Commitment of BIDDERS

3. The BIDDERS commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post-contract stage in order to secure the contract or in furtherance to secure it and in particular commits itself to the following:-

3.1 The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER, connected directly or

indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.

3.2 The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Authority or otherwise in procuring the contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the contract or any other contract with the Government.

3.3 BIDDER shall disclose the name and address of all its native and foreign agents, representatives, principles and associates.

3.4 BIDDER shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/contract.

3.5 The BIDDER further confirms and declares to the Authority that the BIDDER is the original company/ firm and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the Authority or any of its functionaries, whether officially or unofficially to the aware of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

3.6 The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments has made, is committed to or intends to make to officials of the Authority or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

3.7 The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.

3.8 The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

3.9 The BIDDER shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the BUYER as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any

electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.

3.10 The BIDDER commits to refrain from giving any complaint directly or indirectly through any other manner without supporting it with full and verifiable facts.

3.11 The BIDDER shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

3.12 If the BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER, either directly or indirectly, is a relative of any of the officers of the Authority, or alternatively, if any relative of an officer of the Authority has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filing of tender.

The term 'relative' for this purpose shall have the same meaning as defined in Section 2 of the Companies Act, 2013.

3.13 The BIDDER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the Authority.

4. Previous Transgression

4.1 The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the tender process.

4.2 If the BIDDER agrees that it makes incorrect statement on this subject, BIDDER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

5. Earnest Money (Security Deposit)

5.1 While submitting Financial bid, the BIDDER shall deposit Bank guarantee for an amount (specified in RFP) as Earnest Money/Security Deposit, with the Authority through any of the following instruments:-

- (i) Bank Draft or a Pay Order in favour of TRAI, New Delhi

- (ii) A confirmed guarantee by a Scheduled Commercial Bank, promising payment of the guaranteed sum to the Authority on demand within three working days without any demur whatsoever and without seeking any reasons whatsoever. The demand for payment by the BUYER shall be treated as conclusive proof for payment.
- (iii) Any other mode or through any other instrument (to be specified in the RFP).

5.2 In the case of successful BIDDER a clause would also be incorporated in the Article pertaining to Performance Bond in the agreement that the provisions of Sanctions for Violation shall be applicable for forfeiture of Performance Bond in case of a decision by the Authority to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

5.3 No interest shall be payable by the Authority to the BIDDER on Earnest Money/Security Deposit for the period of its currency.

6. Sanctions for Violations

6.1 Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the Authority to take all or any one of the following actions, wherever required:-

- (i) To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.
- (ii) The Earnest Money Deposit (in pre-contract stage) and/or Security Deposit/Performance Bond (after the contract is signed) shall stand forfeited either fully or partially, as decided by the Authority and the BUYER shall not be required to assign any reason therefore.
- (iii) To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.
- (iv) To recover all sums already paid by the Authority, and in case of an Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the BIDDER from the BUYER in connection with any other contract for any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.

(v) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the BUYER, along with interest.

(vi) To cancel all or any other Contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the Authority resulting from such cancellation/rescission and the Authority shall be entitled to deduct the amount so payable from the money(s) due to the BIDDER.

(vii) To debar the BIDDER from participating in future bidding processes of the Government of India for a minimum period of five years, which may be further extended at the discretion of the Authority.

(viii) To recover all sums paid in violation of this Pact by BIDDER(s) to any middleman or agent or broker with a view to securing the contract.

(ix) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the Authority with the BIDDER, the same shall not be opened.

(x) Forfeiture of Performance Bond in case of a decision by the Authority to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

6.2 The Authority will be entitled to take all or any of the actions mentioned at Para 6.1(i) to (x) of this Pact also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal Code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

6.3 The decision of the Authority to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Independent Monitor(s) appointed for the purposes of this Pact.

7. Fall Clause

7.1 The BIDDER undertakes that he has not supplied/is not supplying similar product/systems or subsystems and having same scope of work, quantity, specifications, schedule for delivery, payment terms and all other applicable terms and conditions at a price lower than that offered in the present bid in respect of any other Ministry/ Department of the Government of India or PSU and if it is found at any stage that similar product/system or sub-system and having same scope of work, quantity, specifications, schedule for delivery, payment terms and all other applicable

terms and conditions was supplied by the BIDDER to any other Ministry/Department of the Government of India or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the BIDDER to the Authority, if the contract has already been concluded.

8. Independent Monitors

8.1 The Authority may appoint Independent Monitors (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission.

8.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

8.3 The Monitors shall not be subject to instructions by the representations of the parties and perform their functions neutrally and independently.

8.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings.

8.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the Authority.

8.6 The BIDDER(s) accept(s) that the Monitor has the right to access without restriction to all Project documentation of the Authority including that provided by the BIDDER. The BIDDER will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER/Subcontractor(s) with confidentiality.

8.7 The Authority will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.

9. Facilitation of Investigation

In case of any allegation of violation of any provisions of this Pact or payment of commission, the Authority or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

10. Law and Place of Jurisdiction

This Pact is subject to Indian Law. The place of performance and jurisdiction is Delhi.

11. Other Legal Actions

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

12. Validity

12.1 The validity of this Integrity Pact shall be from date of its signing and extend up to 5 years or the complete execution of the contract to the satisfaction of both the Authority and the BIDDER, including warranty period, whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

12.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

13. The Parties hereby sign this Integrity Pact at _____ on _____.

Authority

BIDDER

Name of the Officer

CHIEF EXECUTIVE OFFICER

Designation

TRAI

Witness

Witness

1. _____

1. _____

2. _____

2. _____