Last Date of Submission of Bid By 03.00 PM on 14th March, 2017

TELECOM REGULATORY AUTHORITY OF INDIA

Mahanagar Doorsanchar Bhawan, Jawaharlal Nehru Marg (Old Minto Road), New Delhi – 110 002

<u>TENDER DOCUMENT FOR DRIVE TEST OF CELLULAR</u> <u>MOBILE NETWORKS IN SELECT CITIES, HIGHWAYS AND</u> <u>RAILWAY ROUTES (IN TRAIN)</u>

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TENDER DOCUMENT FOR AUDIT

Invitation of Bids for Audit & Assessment of Quality of Service

Notice Inviting Tender

1. The Regulatory Authority of India. Telecom 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 agency), who satisfy the eligibility conditions specified in the Tender Document, for conducting drive test of mobile networks, 2G, 3G and 4G, to assess Quality of Service for voice and data in terms of the benchmarks specified in the "Standards of Quality of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service Regulations, 2009 (7 of 2009) dated 20thMarch, 2009 and Standards of Quality of Service for Wireless Data Services Regulations, 2012" (26 of 2012) dated 4th December 2012, as amended from time to time, on Zonal basis, namely East Zone, West Zone, North Zone and South Zone:-

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: Andhra Pradesh (including Telangana), Karnataka, Tamil Nadu (including 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 the purpose of bid submission.

4. The agencies shall submit the bid, before the last date and time of submission, in a sealed envelope containing –

(i) two sets of technical bid, in separate sealed covers - one set marked as 'Original Bid' and the other set marked as 'True Copy', containing the following:-

- of the tender document (a) copy and а clarifications/corrigendum issued, if any, with signature of the authorised representative of the agency in each of the tender document and page clarifications/corrigendum issued, if any, as token of the fact of the agency having read and accepted the terms and conditions.
- (b) standard formats for technical proposal given at Section-IV, with all the necessary details filled by the bidders;
- (c) Pre Contract Integrity pact signed by the agency as per Form given in the **Annexure 4**;
- (d) Documents relating to eligibility as prescribed in this tender document;
- (ii) earnest money of Rs.2, 00,000/- (Rupees two lakhs only) for each zone separately;

5. In the event of any discrepancy between the copies, the Original bid shall be treated as authentic notwithstanding the discrepancy in other copy. The name, address, Fax number, telephone/mobile number and email 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 be liable to be rejected.

6. An agency may submit bids for more than one Zone, the bid for each zone shall be submitted in separate sealed envelope. The bids in separate sealed envelope for each Zone must be accompanied by earnest money of Rs.2, 00,000/- (Rupees two lakhs only), as per the details given in clause 3 of the section-I of the tender document.

7. The bid, complete in all respects, shall be submitted, not later than 3.00 PM on the **14th of March, 2017**, to Joint Advisor (QoS),Telecom Regulatory Authority of India, Room No.707, 7th Floor, Mahanagar Doorsanchar Bhawan, Jawaharlal Nehru Marg (Old Minto Road), New Delhi-110 002. The technical bids will be opened at **3.30PM on 14th March, 2017**. 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 February, 2017 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 bidders may, on their own, attend the said conference without waiting for any further communication.

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

9. **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.

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

11. Any change in the schedule of tender submission or opening etc. shall be communicated through e-mail provided by the agency at the time of submission of bid.

(Shaji Abraham) 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 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 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 (<u>www.trai.gov.in</u>).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 2.00 PM of 20th February, 2017 to Joint Advisor (QoS),** Telecom Regulatory Authority of India, 7th Floor, Mahanagar Doorsanchar 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.trai.gov.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 (<u>www.trai.gov.in</u>) 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 pretender conference will be held with the prospective bidders, for technical discussion/clarifications on technical and other matters regarding terms and conditions of the tender document. This conference will be held on **20th February, 2017 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 bidders should, on their own, attend the said conference without waiting for any further communication.

3. Earnest Money Deposit (EMD)

3.1 The prospective bidder shall submit along with their bid a bank draft for a sum of **Rs.2,00,000 (Rupees Two Lakhs only)** drawn on any scheduled bank in favour of "TRAI" 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. 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 the contract agreement.

3.2 The EMD may be forfeited by the TRAI 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 with the Clause 9 of this Section or
 - (iii) to perform the work as per the Terms of Reference

4. Eligibility

4.1 The agency satisfying the following conditions shall be eligible for bidding, namely:

(i) the agency should have a turnover of not less than rupees two crore during the financial year 2015-16 and should have a minimum cumulative turnover of rupees four crores in the last three consecutive financial years;

(ii) the agency should have at least three years experience in conducting similar work of assessment of Quality of Service through drive test of mobile networks as given in the detailed scope of work at para 2 of Section-II.

(iii) the agency should have sufficient technically qualified staff and infrastructure to carry out assessment of Quality of Service through drive test of cellular mobile networks as per the Terms of Reference;

(iv) the agency should have the drive test tools of the standard which is widely used by the telecom service providers in the country, along with the required number of handsets for conducting drive test of mobile networks as per the scope of work calibrated by the manufacturer;

4.2 The agency shall submit along with the standard format for technical proposal ----

- (a) documentary evidence regarding fulfilment of turnover conditions, including income tax returns for the last three consecutive years of 2013-14, 2014-15 and 2015-16 and a copy of PAN;
- (b) documentary evidence regarding similar experience of at least three years in conducting drive test of cellular mobile networks for assessment of Quality of Service;
- (c) documentary evidence showing that the agency has sufficient technically qualified staff and infrastructure to carry out assessment of Quality of Service through drive test of cellular mobile networks as per the Terms of Reference and such documentary evidence shall include proof of employment of staff along with proof of payment of salary, Provident Fund etc.; and
- (d) a declaration that the agency shall earmark at least two technically qualified staff member for each Service area exclusively for this project and such officials will not be changed during the project period, without the prior written approval of TRAI;
- (e) copy of the licence or certification of the drive test tool along with copy of calibration certificate of the tools.

5. Terms of Reference

The Terms of Reference for drive test of cellular mobile networks 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 agency and submitted before the last date and time of submission. The agency 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 **14th March, 2017**. Any bid received after this specified date shall be rejected and returned unopened to the agency.

9. Performance Bank Guarantee Bond

The selected agency shall furnish a Performance Bank Guarantee in 9.1 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 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 agency beyond the afore-mentioned period, TRAI may cancel the said letter of acceptance and forfeit the Earnest Money Deposit (EMD) submitted by the agency. Initially, the bank guarantee shall be valid for a period of one year and six months. The 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 TRAI to encash the bank guarantee and to convert it into a cash security without any reference to the 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 agency. No interest in any form shall be payable by TRAI to the agency before or after expiry of the Performance Bank Guarantee

9.2 In case the agreement is extended to cover assessment of Quality of Service through drive test of cellular mobile networks for one or more quarter, the 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 the validity of such performance bank guarantee to cover the extended period, 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 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 –

- (i) the agency's conformity with the tender conditions;
- (ii) the agency's capability to perform the assignment;
- (iii) past experience in carrying out works of similar nature;
- (iv) profile of personnel to be engaged for this assignment; and
- (v) financial capability of the agency.

11.3 The 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.

11.4 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 covering 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".

11.5 The lowest valid offer shall be declared successful, unless there is vast difference in the quotes of the lowest valid offer and the second lowest offer, and TRAI has reasons to believe that the lowest bidder may not be able to perform as per the tender documents at such quoted price. In such a situation, TRAI may, at its discretion, award the bid to the second lowest bidder. 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. Also in case the bidder who has quoted the lowest in the financial bid does not accept the bid award or failed to submit the Performance Bank Guarantee, the bid may be awarded to the second lowest quoted (L2) bidder.

12. Validity of Contract

The agreement for undertaking assessment of Quality of Service through drive test of cellular mobile networks shall be valid for a period of 18 (eighteen) months from the date of signing of the agreement, covering drive tests of cellular mobile networks in 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 or more quarter or for one more year at the same rate and terms & conditions as per the agreement, at the sole discretion of TRAI, to cover the assessment of Quality of Service through drive test of cellular mobile networks 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 nonperformance, and when removed, the party shall continue performance with utmost urgency.

13.2 If at any time during the performance of the contract, the agency should encounter condition impeding timely completion of the work, the 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 agency, TRAI may evaluate the situation and may at its discretion extend the period for performance of the contract after mutual discussion with the agency.

14. Termination:

14.1 Without prejudice to its right to impose penalty and to forfeit the Performance Bank Guarantee, TRAI reserves the right to terminate the agreement (i) if the agency fails to carry out the task as per the terms and conditions specified in the tender documents and agreement; or (ii) if the report is not as per the format approved by TRAI; or (iii) if the report contains information, which is found to be factually incorrect or materially wrong by TRAI. The decision of TRAI as regards such material incorrectness of the report shall be final and binding on the agency.

14.2 Delivery of the performance of the work shall be made by the 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 agency and TRAI reserves the right to get the work completed for the remaining part at the risk and cost of the defaulting agency.

15. Indemnity

In no event shall TRAI be liable to 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 agency under this agreement. The 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 agency, its agents or servants.

16. Coordination

16.1 The agency shall appoint one of its employees as coordinator who shall represent the 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 assessment of Quality of Service through drive test of cellular mobile networks and submission of the reports as per the following schedule and after TRAI is satisfied that the report submitted by the agency complies with the formats, norms and quality specified in the agreement:-

S1.	Schedule	% payment in terms of total		
No.		payment for one year		
1.	assessment of Quality of Service	Contract value for the cities, highways and railway routes covered in each of the service areas in the zone		
	first quarter for the specified			

	cities, highways and railway	
	routes in all the service areas in	
	the zone and acceptance of the	
	report by TRAI	
2.	Submission of the reports on	Contract value for the cities,
	assessment of Quality of Service	highways and railway routes
	through drive tests of mobile	covered in each of the service
	networks conducted during the	areas in the zone.
	second quarter for the specified	
	cities, highways and railway	
	routes in all the service areas in	
	the zone and acceptance of the	
	report by TRAI	
3.	Submission of the reports on	Contract value for the cities,
5.	assessment of Quality of Service	highways and railway routes
	through drive tests of mobile	covered in each of the service
	networks conducted during the	
	third quarter for the specified	
	cities, highways and railway routes in all the service areas in	
	the zone and acceptance of the	
	report by TRAI	
4	Submission of the reports on	
	assessment of Quality of Service	highways and railway routes
	through drive tests of mobile	covered in each of the service
	networks conducted during the	areas in the zone.
	fourth quarter for the specified	
	cities, highways and railway	
	routes in all the service areas in	
	the zone and acceptance of the	
	report by TRAI	

17.2 In case the agency has done any additional number of drive test in a city, as per the directions of TRAI, payments for such additional work shall be made in proportion to the total number of days as per the rate quoted for similar service in a similar category of city in the service area covered. For example, in case 5 days of drive test (including data) is to be done in a service area as per the tender, payment for an additional day of drive test will be made at the rate of one fifth of the quoted price. In case the agency has done any additional number of drive tests in a highway or railway route, as per the directions of TRAI, payments for such additional work shall be made in proportion to the rate quoted for such drive test under the respective zone.

17.3 In case the validity of the agreement is extended for one or more quarter or for one more year, in accordance with clause 12 hereinbefore, payment for the extended period will be made as per the above schedule detailed in clause 17.1 and 17.2.

17.4 The work on assessment of Quality of Service of mobile networks through drive tests shall be completed and all the reports shall be submitted within the respective time limits as specified in the tender or agreement. The drive tests should be done in such a manner that around 25% of the total number of drive tests in each of the service areas covered in the zone shall be completed in a quarter. <u>The cities, highways and</u> <u>railway routes to be covered in a quarter in each of the service areas in</u> <u>the zone and the schedule of drive tests shall be decided by TRAI, in</u> <u>consultation with the agency.</u> The reports on assessment of Quality of Service of mobile networks through drive tests shall be submitted to TRAI within 21 days of completion of drive test in a city, highway and railway route. No extension of time for completion of the 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:

17.5 In case the report on assessment of Quality of Service of mobile networks through drive tests for a city or highway or railway route is delayed beyond 21 days of completion of the drive test, a penalty shall be levied by TRAI at the rate of –

- (a) 5% (five per cent) of the value of contracted work for the city or highway or railway route, for the first week of delay;
- (b) additional 5% (five per cent) of the value of contracted work for the city or highway or railway route, for the second week of delay; and
- (c) 20% (twenty per cent) of the value of contracted work for the city or highway or railway route, for delay beyond two weeks and up to four weeks;

which shall be deducted from the amount payable to the 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:

Provided that TRAI may, at its discretion, accept a report which is delayed by more than four weeks, but not later than six weeks, subject to levy of a penalty at the rate of 30% (thirty per cent) of the value of contracted work for the city or highway or railway route.

17.6 In case the report on assessment of Quality of Service of mobile networks through drive tests for a city or highway or railway route is found by TRAI to be materially or factually incorrect; or the drive test is not done for any service provider for a service in a city/ highway/ railway route or the required number of drive tests for a service is not done, other than for reasons which are beyond the control of the agency (the decision of TRAI in such case is final); or the report 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 the report is 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 agency. 17.7 Without prejudice to the provisions contained in Clause 17.6, in any specific case where the report submitted by the Agency for a city or highway or railway route is found by TRAI to be incomplete in respect of any of the service as either all the service providers are not covered or the required number of drive tests were not done for that service, other than for reasons which are beyond the control of the agency (the decision of TRAI in such case is final), TRAI may, at its discretion, accept such report:

Provided that where the number of service providers not covered in the drive test for voice or data service in a city or highway or railway route is more than six for any reasons, other than for reasons which are beyond the control of the agency (the decision of TRAI in such case is final), such report shall not be accepted and no payment shall be made for such incomplete report;

Provided further that where the number of service providers not covered in the drive test either for voice service or for data service in a city or highway or railway route is more than 3 and upto 6, for any reasons, other than for reasons which are beyond the control of the agency (the decision of TRAI in such case is final), payment for such incomplete report shall be reduced by (i) 40% for drive test in highways and railway routes; (ii) the following formula for drive test in cities –

 $\frac{A \times C \times 40}{B \times 100}$ for voice service; and (iii) $\frac{A \times 40}{B \times 100}$ for data service, where $\frac{A \times C \times 40}{B \times 100}$

A = total quote for a service area

B = total number of days of drive tests to be done in the service area

C = number of days of drive test for voice service to be done in the city

Provided also that where the number of service providers not covered in the drive test either for voice service or for data service, for any reasons, other than for reasons which are beyond the control of the agency (the decision of TRAI in such case is final), is upto 3, payment for such incomplete report shall be reduced by (i) 25% for drive test in highways and railway routes; (ii) the following formula for drive test in cities –

 $\frac{A \times C \times 25}{B \times 100}$ for voice service; and (iii) $\frac{A \times 25}{B \times 100}$ for data service, where $\frac{A \times C \times 25}{B \times 100}$

A = total quote for a service area

B = total number of days of drive tests to be done in the service area

C = number of days of drive test for voice service in the city

Provided also that where more than fifty percent of the required number of drive test to be conducted for a service in a city or highway or railway route is not done such report shall not be accepted and in other cases if the report is accepted by TRAI, payment for such incomplete report shall be reduced, from the contracted value for drive test for that service in the city or highway or railway route, in the proportion of number of days of drive test undertaken to the total number of days the drive test was required to be undertaken as per the tender documents;

<u>Explanation</u>: Where the required route kilometre is not covered for a service in a day such drive test will not be counted towards the required number of drive test for that service.

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 assessment of Quality of Service of mobile networks through drive tests and reports shall be the sole property of TRAI. The 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 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 the employees to whom access to the document/data/software will be granted.

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 agency, the matter shall be referred to the Secretary, TRAI who may himself act as sole arbitrator or may nominate, 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 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 and bid cost:

The bid shall be submitted in English language. 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 bid.

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 agency.

24. Bid validity period:

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

25. Further assigning of tender in whole or part:

The 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 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 agency shall be forfeited and the agency shall be liable to be blacklisted.

27. Peer Audit or re-verification of the report:

TRAI may, at its discretion, undertake peer audit of the report submitted by the agency through a different agency or undertake verification of the report through its officers, and in case the report is found to be materially incorrect, the agency shall be liable for as per clause 17.5 and 17.6 of Section I of this Tender Document:

Provided that the terms and conditions of peer audit through agency from other zone shall be as decided by TRAI with such agency in accordance with the contract with such agency.

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.

1.2The Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service, Regulations, 2009 (7 of 2009) dated 20th March, 2009 prescribe the Quality of Service standards for Cellular Mobile Telephone Service (both 2G and 3G). The Standards of Quality of Service for Wireless Data Services Regulations, 2012 dated 4th December 2012 (26 of 12) prescribe the Quality of Service standards for wireless data services. A copy of the said regulations is available at TRAI's website (www.trai.gov.in). TRAI will be laying down the Quality of Service for 4G VOLTE service and such Quality of Service standards will be applicable for assessing the Quality of Service of 4G VOLTE networks. The objective of the Terms of Reference is to carry out assessment of Quality of Service of mobile networks through drive tests in select cities, highways and railway routes (in train) in each of the service areas in the contracted zone. For this purpose, TRAI wants to engage an agency for assessment of Quality of Service of mobile networks, as per the scope of work indicated in clause 2, for the following services through drive tests:-

(a) voice service – 2G, 3G and 4G VOLTE services

(b) data service – 2G, 3G and 4G services

(c) highway and railway route testing – 2G, 3G and voice 4G VOLTE service

1.3 The scope of work of assessment of Quality of Service of mobile networks through drive tests includes:

(a) Drive test of the RF networks along with web visualization as per the format given by TRAI.

(b) Capturing of data related to RF networks as per the parameter laid down in the Quality of Service Regulations mentioned in 1.2 above.

(b) 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.

1.4 S. No. (i) to (x) of regulation 5 and regulation 6 under Section III pertain 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. The parameters of Quality of Service for

cellular mobile telephone services are specified under the head Network Service Quality Parameters.

1.5 S. No. 3.7 and 3.8 under regulation 3 under Section II of the Standards of Quality of Service for Wireless Data Services Regulations, 2012 dated 4th December 2012(26 of 12) contain the parameters and benchmarks of the Quality of Service to be achieved by the service providers for wireless data services. The parameters of QoS for wireless data specified in the regulation 3 of Standards of quality of service for wireless data Services regulations 2012 are PDP context Activation Success rate and Drop rate

1.6 TRAI will be laying down Quality of Service parameters and benchmarks for 4G VOLTE service. Also TRAI may amend/ 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.

1.7 The detailed explanation and measurement methodology of each parameters and benchmarks for Cellular Mobile Telephone Service and Wireless data service are given in the Explanatory Memorandum of the regulations mentioned in Clause 1.2. The parameters, whose data is to be assessed through drive tests, but not limited to, are as follows:

Serial Number	Name of Parameter	Benchmark
А	Network Service Quality Parameters:	
(i)	Connection Establishment (Accessibility)	
	(a) Call Set-up Success Rate(within licensee's own network)	≥ 95%
	(b) SDCCH/ Paging Channel Congestion	≤ 1%
	(c) TCH Congestion	≤ 2%
(ii)	Connection Maintenance (Retainability)	
	(a) Call Drop Rate	≤ 2%
	(c) connections with good voice quality	≥ 95%
(iii)	Service coverage	

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

(B) 3G

Serial	Name of Parameter Benchmark		
Number			
А	Network Service Quality Parameters:		
(i)	Connection Establishment (Accessibility)		
	(a) Call Set-up Success Rate(within	≥ 95%	

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Signature of authorized representative of bidder 17

	licensee's own network)	
	(b) RRC Congestion	≤ 1%
	(c) Circuit Switched RAB Congestion	≤ 2%
(ii)	Connection Maintenance (Retainability)	
	(a) Circuit switched Voice Drop Rate	≤ 2%
	(b) Worst affected cells having more than 3% Circuit switched Voice Drop rate	≤ 3%
	(c) connections with good Circuit switched voice quality	≥ 95%
(iii)	Service coverage	

(ii) Wireless Data Service

Serial Number	Name of Parameter	Benchmark
i)	PDP Context Activation Success Rate	≥95%
ii)	Drop rate	≤ 5%

2. Detailed scope of work:

2.1The main purpose of the tender is to assess Quality of Service performed by cellular mobile service providers through drive tests for (i) voice service in 2G (GSM & CDMA), 3G and 4G VOLTE networks; (ii) data service in 2G (GSM & CDMA), 3G and 4G networks, in select cities in each of the service areas under the respective Zone; and (iii) voice service in 2G, 3G and 4G VOLTE networks in select highways and railway routes in the respective zone. The cities to be covered are metro service areas of Delhi, Mumbai and Calcutta; all cities or urban agglomeration with more than one million population as per the 2011 Census of India; capital cities of all states; major Union Territory of Chandigarh and Pondicherry; and cities with less than one million population of Hissar, Bhiwani, Warangal, Mysore, Belgaum and Mangalore. Drive tests for voice service has to be done for (i) 6 days in the metro service areas of Delhi, Mumbai and Chennai, Hyderabad and Bangalore; (ii) four days in cities with more than one million population; and (iii) two days in other cities. Drive tests for data service have to be done in all the cities for one day. In addition to the cities, the agency will have to undertake drive test in select Highways and Railway routes as decided by the Authority from time to time. The drive tests on highways and in train on railway routes may cover multiple service areas in the respective zone. TRAI will inform the agency about the highways and railway routes to be covered in a quarter. There shall be a minimum of five days of drive tests each on highways and in train on railway routes to be conducted in a zone in a year. In case a service provider who has a licence in a service area for providing 3G service is providing such service only through Intra Circle Roaming Agreement and

the service is offered through SIM issued in its name, such service provider will also be covered in the drive test.

2.2 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: Andhra Pradesh (including Telangana), Karnataka, Tamil Nadu (including 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.

2.3 The details of the areas covered under each Licensed Service Area/ Metro Service Area, cities to be covered under each Licensed Service Area/ Metro Service Area and the number of days for which drive tests are to be conducted are given in **Annexure-2**.

2.4 The agency shall undertake assessment of Quality of Service of cellular mobile networks through drive tests, for voice and data viz. Voice service in 2G (GSM & CDMA), 3G and 4G VOLTE networks and data service in 2G, 3G and 4G networks, provided by every service provider (licensee) in each of the selected cities under the circles/metro service areas and for voice service in 2G, 3G and 4G VOLTE networks in the highways and railway routes notified by TRAI under the respective Zone. The details of the service providers (licensees) operating 2G (GSM & CDMA), 3G and 4G services, including 4G VOTE services in each of the licensed service area/ metro service area are given in Annexure-3. In addition to above, TRAI may instruct the agency to undertake drive test in any other city or additional highway/railway routes in excess of the minimum number of days of drive tests in a quarter and the agency shall undertake drive tests in such additional city or highway or railway route, as the case may be. Further, such additional drive tests could be for a particular service or services or for all the services. Payments for such additional drive tests shall be made as per the proportionate rate for that city for such service and taking into account the number of additional days of drive test. In the case of additional highways and railway routes covered, payments shall be made in proportion to the rate quoted for the minimum number of such drive tests in the respective zone. TRAI may also replace a city in a service area with a similar category of city or lower category of city in that service area.

- 2.5 The drive test shall be conducted in the following manner:-
 - (a) Drive tests shall be undertaken in at least 25% of the cities to be covered in a service area in a quarter. The cities to be covered in a quarter shall be decided by TRAI, in consultation with the agency.
 - (b) Drive tests in a city for a specific service shall be conducted simultaneously for all service providers providing that service. The agency may undertake drive test in a service area simultaneously for voice and data services, covering 2G, 3G, 4G services and 4G VOLTE service, including GSM and CDMA services.
 - (c) Drive tests shall be undertaken in select highways and railway routes (in train), for voice service covering 2G, 3G and 4G VOLTE technology, including GSM and CDMA services.
 - (d) The results of RF drive tests of the mobile networks of service providers should be uploaded on 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 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.
 - (e) The 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.
 - (f) Independent drive test shall cover a city and its adjoining areas, including congested areas and important indoor sites, and shall normally cover a distance of 150 kilometres in a day.
 - (g) The agency shall follow the instructions issued by TRAI, including the Regional Offices of TRAI, in this regard

2.6 In the case of drive tests on Highways the minimum distance to be covered is 250 KM in a day. In the case of drive tests on Railway routes (in train), the drive test shall normally cover a distance 350 KM in a day, subject to a minimum distance of 250 KM. The number of days to be covered for a particular segment of highway or railway route shall depend on the kilometres and TRAI shall inform the agency about the selection of the highway route and railway routes and the dates on which such drive tests are to be carried out.

Drive Test Methodology:

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

i. The 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 of the LSA divided into small grids, based on the population of the LSA, the drive test should be done to check the following parameters:

Voice:-

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

Data:-

- a. Median Throughput (Down link/uplink)
- b. Success rate
- c. Web page download time
- d. Video streaming delay
- e. Latency

ii. The agency shall analyse the network related complaints of concerned city. The drive test shall be conducted using licensed tools/devices with more focus on areas where large numbers 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 falling in the city.

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, in the case of drive tests in cities and highways, 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 90/120 seconds.

ix. Measurement using engineering handsets would not be acceptable.

x. Data Test drive concurrent with voice test and hot spots measurement for assessing the mobile data services for all technology across the concerned city.

- xi. Data test should include the following:
 - a) Data download/upload
 - b) On line video streaming
 - c) Web browsing with 3 links of e/m commerce website
 - d) Latency (Ping)
 - e) On line payments on hotspot

2.8 TRAI may modify the above methodology and the agency has to undertake drive test of mobile networks as per such modification, if any, made by TRAI. After the completion of the drive test, the agency is required to submit the report of the independent drive test in such a manner that all the metrics captured for different services (voice and data) and different service providers are displayed using a Graphical User Interface, data visualization dashboards and analytical based tools. The analytical based tool/ software shall internationally compatible and be used to show comparison of TSP performance/ comparison of TSP's at city/ highway/ railway route level, with other TSP's, grid level, service area level and with global TSP's. The format of report shall be provided by TRAI and the agency shall submit the report in such format.

Guidelines for Tamper-proof data collection:

2.9 Before the execution of data collection activities, initial planning for the smooth flow shall be done by the field engineer as per the check list given here under

- 1. The drive test tool, used in drive test shall be of latest version and licensed and shall be clearly specified in the report.
- 2. The phones used in the drive equipment shall have the necessary calibration records.
- 3. Power and drive test phone positions should be properly setup. To minimize power problems, direct battery connections be used.
- 4. The equipment shall be placed in cabinets or installed in the holder in the test vehicles/ train to make it rugged and shock proof. Each measurement is GPS referenced and stored on a laptop computer.
- 5. The test terminals (MS/UE) are to be positioned in the middle of the cabin (1.5 Mtrs), at the median of the side windows height, and equally spaced one from each other (not more than 7 MS/UE).
- 6. The test MS/UE is to be installed on a rail or mounting board in the particular case of larger vehicles such as Mini Vans or SUVs.

Data Collection Checklist:

2.10 Standard industry practices shall be adopted while performing the data collection to ensure it is done in a controlled environment to replicate the performance of the customer experiences; to mitigate advantages/ disadvantages to any particular operator. Same type of mobile devices and servers shall be used across all operators for all the voice test cases.

2.11 Post Processing and grid based Analyses:

- The Data Post Processing stage should be started immediately after completion of each day drive testing. Following practice shall be exercised to ensure the tamper proof results :-
- The team shall be able to load the data / Log files on the relevant post processing tool for analysis. All external connection to these desktops

like CD ROM, flash drives and internet shall be disabled to avoid duplication of log files.

• The city under test shall be divided into smaller grids and narrow down at the grid level to identify and highlight the grid/ area level problems rather than looking at the complete city level. The highlighted grid/ area level problems shall clearly indicate the areas with poor service levels for each service provider.

3. Miscellaneous:

3.1 Expenses towards boarding, lodging and travelling for conducting assessment of Quality of Service of mobile networks through drive tests shall be borne by the agency itself. The service provider shall provide SIM cards, free of cost, for the drive tests. The agency has to contact the service provider in this regard and has to collect the SIM card prior to undertaking the drive tests.

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

4. Reporting Formats:

4.1 The agency is required to develop data formats including executive summary, critical findings and detailed data analysis thereof for reporting the results of such drive test. The agency may utilise software for reporting, preferably MS Word & MS Excel in Window environment.

The agency shall submit to TRAI sample design and sample 4.2 reporting formats within 4 weeks of signing of the agreement. TRAI may suggest modifications to the sample design and sample reporting formats and the 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 agency within time period as specified in the deliverv schedule at clause after incorporating 7. 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 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 Agency shall carry out such changes in the reporting format.

5. Deliverables

5.1 The agency shall submit the drive test reports for each city, highway and railway route in the formats approved by TRAI for the purpose. The railway route and highway drive test conducted, covering more than one service area, shall be reported separately for each service area. Two copies of such report covering all services, both voice and data, and all technologies shall be submitted to TRAI within the time period prescribed in this Tender Document. The soft copies of each report shall also be submitted by the Agency along with the hard copies.

5.3 The report shall contain the results of drive tests, executive summary, critical findings and comparison of performance of the service providers on various Quality of Service parameters in the city or highway or railway route, as the case may be. The report shall cover all services, 2G and 3G voice services (including GSM and CDMA) and 4G VOLTE service. The report shall also contain an Executive Summary and critical findings along with detailed analysis to share with the service provider so as to take further follow-up action.

5.4 Reports shall be submitted for approval within twenty one days of completion of drive test of mobile networks in the city or highway or railway route, as the case may be. The report shall contain the findings on assessment of Quality of Service provided by service providers carried out in accordance with Clause 2 above. The report shall contain performance of each service provider against the Quality of Service parameters. The report shall also contain a comparative analysis of performance of all the service providers in the city or highway or railway route, as the case may be. 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.

6. TRAI's Inputs:

6.1 TRAI will make available the relevant Quality of Service Regulations of Cellular Mobile Telephone Services and Wireless Data Service. TRAI will also make available details of contact persons of service providers and such other information requested by the agency which is available in TRAI and which is necessary for carrying out the assessment of Quality of Service of service providers.

7. Delivery Schedule

S. No.	Deliverable	Period
	Date of award of work as per the contract sa	ay (D)
1.	Submission of all sample design and reporting formats by the Agency	D+2 weeks
2.	Submission of final design and reporting formats by the Agency incorporating modifications and corrections suggested by TRAI and its acceptance	D+4 weeks
3.	Commencement of assessment of Quality of Service of cellular mobile networks through drive tests	Beginning of drive tests- the quarter following date of award of work (D) or any subsequent quarter, as decided by TRAI
4.	Submission of reports of drive tests conducted in the first quarter (separately for each city or highway or railway route)	Twenty one days from the date of completion of the concerned drive test in the first quarter
5.	Submission of reports of drive tests conducted in the second quarter (separately for each city or highway or railway route)	Twenty one days from the date of completion of the concerned drive test in the second quarter
6.	Submission of reports of drive tests conducted in the third quarter (separately for each city or highway or railway route)	Twenty one days from the date of completion of the concerned drive test in the third quarter
7.	Submission of reports of drive tests conducted in the fourth quarter (separately for each city or highway or railway route)	Twenty one days from the date of completion of the concerned drive test in the fourth quarter
8	Submission of reports of company/group of companies covering each circle/service area at the end of the year	One month from the end of fourth quarter
9.	Commencement of assessment of Quality of Service of mobile networks through drive tests for the first quarter for the extended period	From the end of the fourth quarter or any later period as decided by TRAI
10	Submission of Performance Guarantee for extension of contract for one more year	Within 15 (fifteen) days of

		intimation at
		intimation about such extension
11	Calmination of moments of duine toots	by TRAI
11.	Submission of reports of drive tests	Twenty one days
	conducted in the first quarter of the extended	from the date of
	period (separately for each city or highway or railway route)	completion of the concerned drive
	Tallway Toule)	test in the first
		quarter
12.	Submission of reports of drive tests	Twenty one days
	conducted in the second quarter of the	from the date of
	extended period (separately for each city or	completion of the
	highway or railway route)	concerned drive
		test in the
		second quarter
13.	Submission of reports of drive tests	Twenty one days
	conducted in the third quarter of the	from the date of
	extended period (separately for each city or	completion of the
	highway or railway route)	concerned drive
		test in the third
		quarter
14.	Submission of reports of drive tests	One month from
	conducted in the fourth quarter of the	the end of the
	extended period (separately for each city or	fourth quarter of
15	highway or railway route)	extended period
15.	Submission of reports of company/group of	One month from the end of fourth
	companies covering each circle/service area	
	at the end of the year	quarter of extended period
		crititueu periou

SECTION-III

Schedule for Financial Bid for Assessment of Quality of Servic in select cities, highways and railway routes

The Agency shall submit the Financial Bid in the format given below:

Note: 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 A: Delhi Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
1	Delhi (including Gurgaon & NOIDA)	6	1	For 17 days of drive test	For 17 days of drive test
2	Faridabad	4	1		
3	Ghaziabad	4	1]	
	Total	14	3		

B: Jammu & Kashmir Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
4	Srinagar	4	1	For 5 days of drive test	For 5 days of drive test

C: Himachal Pradesh Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
5	Shimla	2	1	For 3 days of drive test	For 3 days of drive test

D: Punjab Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
6	Amritsar	4	1	For 15	For 15
7	Chandigarh	4	1	days of	days of
8	Ludhiana	4	1	drive test	drive test
	Total	12	3		

E: Haryana Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
9	Hissar	2	1	5	For 6 days of drive
10	Bhiwani	2	1	of drive test	test
	Total	4	2		

F: Rajasthan Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
11	Jaipur	4	1	For 15	For 15
12	Jodhpur	4	1	days of	days of
13	Kota	4	1	drive test	drive test
	Total	12	3		

G: Uttar Pradesh (West) Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
14	Agra	4	1	For 13	For 13
15	Meerut	4	1	days of	days of
16	Dehradun	2	1	drive test	drive test
	Total	10	3		

H: Uttar Pradesh (East) Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
17	Lucknow	4	1	For 20	For 20
18	Kanpur	4	1	days of	days of
19	Allahabad	4	1	drive test	drive test
20	Varanasi	4	1		
	Total	16	4		

I: Highways to be covered in the North Zone

Highway	No. of days of drive tests	Quotation (Rupees in figures)	Quotation (Rupees in words)
To be decided by TRAI	5	For 5 days of drive test	For 5 days of drive test

J: Railway routes to be covered in the North Zone

Railway route	No. of days of drive tests	Quotation (Rupees in figures)	Quotation (Rupees in words)
To be decided	5	For 5 days of drive	For 5 days of drive
by TRAI		test	test

Quotation for North Zone

Total (A + B + C + D + E + F + G + H + I + J)	Quotation (Rupees in figures)	Quotation (Rupees in figures)

Zone: South zone

A: Tamilnadu Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
1	Chennai	6	1	For 25	For 25
2	Tiruchira- ppalli	4	1	days of drive test	days of drive test
3	Pondicherry	2	1		
4	Madurai	4	1		
5	Coimbatore	4	1]	
	Total	20	5		

B: Andhra Pradesh Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
6	Hyderabad	6	1	For 20	For 20
7	Vijayawada	4	1	days of	days of
8	Visakha- patnam	4	1	drive test	drive test
9	Warangal	2	1		
	Total	16	4		

C: Karnataka Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
10	Bangalore	6	1	For 12	For 12
11	Mysore	2	1	days of	days of
12	Belgaum	2	1	drive test	drive test
13	Mangalore	2	1		
	Total	12	4		

D: Kerala Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
14	Trivandrum	4	1	For 25	For 25
15	Cochin	4	1	days of	days of
16	Kozhikode	4	1	drive test	drive test
17	Thrissur	4	1		
18	Kannur	4	1		
	Total	20	5		

E: Highways to be covered in the South Zone

Highway	No. of days of drive tests	Quotation (Rupees in figures)	Quotation (Rupees in words)
To be decided by TRAI	5		

F: Railway routes to be covered in the South Zone

Railway route	No. of days of drive tests	Quotation (Rupees in figures)	Quotation (Rupees in words)
To be decided by TRAI	5		

Quotation for South Zone

Total (A + B + C + D + E + F)	Quotation (Rupees in figures)	Quotation (Rupees in figures)

Zone: West zone

A: Maharashtra Service Area

Sl. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
1	Pune	4	1	For 23	For 23
2	Nagpur	4	1	days of	days of
3	Aurangabad	4	1	drive test	drive test
4	Nashik	4	1		
5	Goa	2	1		
	Total	18	5		

B: Mumbai Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
6	Mumbai (including suburbs)	6	1	For 12 days of drive test	For 12 days of drive test
7	Navi Mumbai	4	1		
	Total	10	2]	

C: Madhya Pradesh Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
8	Bhopal	4	1	For 30	For 30
9	Gwalior	4	1	days of	days of
10	Indore	4	1	drive test	drive test
11	Jabalpur	4	1		
12	Raipur	4	1		
13	Durg-	4	1		
	Bhilainagar				
	Total	24	6		

D: Gujarat Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
14	Ahmedabad	4	1	For 20	For 20
15	Vadodara	4	1	days of	days of
16	Surat	4	1	drive test	drive test
17	Rajkot	4	1		
	Total	16	4		

E: Highways to be covered in the West Zone

Highway	No. of days of drive tests	Quotation (Rupees in figures)	Quotation (Rupees in words)
To be decided	5	For 5 days of drive	For 5 days of
by TRAI		test	drive test

F: Railway routes to be covered in the West Zone

Railway route	No. of days of drive tests	Quotation (Rupees in figures)	Quotation (Rupees in words)
To be decided by	5	For 5 days of	For 5 days of
TRAI		drive test	drive test

Quotation for West Zone

$\begin{array}{c} Total (A + B + C + D + E + F) \end{array}$	v	Quotation (Rupees in figures)
	(114)000 111 1154100)	

Zone: East zone

A: Kolkata Service Area

Sl. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
1	Kolkata	6	1	For 7 days of drive test	For 7 days of drive test

B: West Bengal Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
2	Asansol	4	1	For 8 days	For 8 days
3	Gangtok	2	1	of drive	of drive
	Total	6	2	test	test

C: Assam Service Area

Sl. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
4	Guwahati	4	1	For 5 days of drive test	For 5 days of drive test

D: North East Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
5	Aizwal	2	1	For 18	For 18
6	Kohima	2	1	days of	days of
7	Agartala	2	1	drive test	drive test
8	Imphal	2	1		
9	Shillong	2	1		
10	Itanagar	2	1		
	Total	12	6		

E: Bihar Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
11	Patna	4	1	For 16	For 16
12	Jamshedpur	4	1	days of	days of
13	Dhanbad	4	1	drive test	drive test
14	Ranchi	4	1]	
	Total	12	4		

F: Orissa Service Area

S1. No.	City	No. of days of drive tests (voice)	No. of days of drive tests (data)	Quotation (Rupees in figures)	Quotation (Rupees in words)
15	Bhubaneswar	4	1	For 5 days of drive test	For 5 days of drive test

G: Highways to be covered in the East Zone

Highway	No. of days of drive tests	Quotation (Rupees in figures)	Quotation (Rupees in words)
To be decided by TRAI	5	For 5 days of drive test	For 5 days of drive test

H: Railway routes to be covered in the East Zone

Railway route	No. of days of drive tests	Quotation (Rupees in figures)	Quotation (Rupees in words)
To be decided by TRAI	5	For 5 days of drive test	For 5 days of drive test

Quotation for East Zone

Total (A + B + C + D + E + F + G + H)	v	Quotation (Rupees in figures)

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 Agency's (Firm's) references- indicating past experience of the agency in undertaking works of similar nature as given in the Terms of Reference in Section-II. The 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 Certificate and PAN Number.
- Form-3 Approach paper on methodology including sample audit design and work plan for performing the assignment indicating how the 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.

PROPOSAL SUBMISSION FORM

(To be submitted on Agency's letter head)

From (Name and address of the agency)

Υ.

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 assessment of Quality of Service of cellular mobile telephone service in select cities, highways and railway routes on zonal basis (**specify the Zone**------)

Sir,

We, the undersigned offer to provide our services for the work of assessment of Quality of Service of cellular mobile telephone service (2G, 3G and 4G – voice & data services and 4G VOLTE services in select cities, highways and railway routes 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 of2017

Yours faithfully,

Witness: Signature..... Address..... Authorized signatory: Name and Title of Signatory Tel. No. Fax No. E-mail address

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, involved and functions performed:	Coordinator, Team Leader)
Narrative Description of Project	
Description of Actual Services Provide	d by Your Staff:

Authorised signatory: Name and Title of Signatory

DESCRIPTION OF THE METHODOLOGY INCLUDING SAMPLE DESIGN AND WORK PLAN FOR PERFORMING THE ASSESSMENT OF QUALITY OF SERVICE OF CELLULAR MOBILE NETWORKS IN SELECT CITIES, HIGHWAYS AND RAILWAY ROUTES

Authorised signatory: Name and Title of Signatory

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.			
2. 3.			
4.			
5.			
6.			
7.			
8.			
9.			
••			
••			
••			

Authorised signatory: Name and Title of Signatory

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]

Authorised signatory: Name and Title of Signatory

Date:

PERFORMANCE BANK GUARANTEE

(To be stamped in accordance with the Stamp Act)

То

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 Agency") has undertaken, in pursuance of agreement No.----- dated ------ (hereinafter called "the Agreement")to conduct assessment of Quality of Service provided by the cellular mobile telecom service providers through drive tests;

AND WHEREAS it has been stipulated by you in the said Agreement that the 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 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 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 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 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 of2017

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'.

Annexure-2

DETAILS OF ZONE WISE SERVICE AREA

NORTH ZONE

S1	Licensed Service Area		Areas covered	Cities to be covered	No. of days of drive test	
	and categ	ory			Voice	Data
01.	Jammu & Kashmir	С	Entire area falling within the State of Jammu & Kashmir including the autonomous council of Ladakh.	Srinagar	4	1
02.	Himachal Pradesh	С	Entire area falling within the State of Himachal Pradesh	Shimla	2	1
03.	Rajasthan	В	Entire area falling within the	Jaipur	4	1
			State of Rajasthan.	Jodhpur	4	1
				Kota	4	1
04.	Punjab	В	Entire area falling within the		4	1
			State of Punjab and Union		4	1
			territory of Chandigarh.	Ludhiana	4	1
05.	Haryana	В	Entire area falling within the State of Haryana except the local areas served by	Hissar	2	1
			Faridabad and Gurgaon Telephone exchanges.	Bhiwani	2	1
06.	ro Ghaziabad, Fa and Gurga		Ghaziabad, Faridabad, Noida,	Delhi (including Gurgaon & NOIDA)	6	1
				Faridabad	4	1
				Ghaziabad	4	1
07.	Uttar Pradesh –	В	Entire area covered by Eastern Uttar Pradesh with the	Lucknow	4	1
	East		following as its boundary	Kanpur	4	1
			districts towards Western Uttar Pradesh: Shahjahanpur,	Allahabad	4	1
			Farrukhabad, Kanpur and Jalaun.	Varanasi	4	1
08.	Uttar Pradesh- West	В	Entire area covered by Western Uttar Pradesh with the following as its boundary	Agra	4	1
			districts towards Eastern Uttar Pradesh: Pilibhit, Bareilly, Badaun, Etah, Mainpuri and Etawah. It will exclude the	Meerut	4	1
			local telephone area of Ghaziabad and Noida. However, it will also include State of Uttarakhand.	Dehradun	2	1

SOUTH ZONE

S1	Licensed Service Areas covered Area and		Cities to be covered	No. of d drive	test	
	category				Voice	Data
01.	Andhra	А	Entire area falling within	Hyderabad	6	1
	Pradesh		the State of Andhra	Vijayawada	4	1
			Pradesh including the	Visakha-	4	1
			state Telangna).	patnam		
				Warangal	2	1
02.	Karnataka	А	Entire area falling within	Bangalore	6	1
			the States of Karnataka	Mysore	2	1
				Belgaum	2	1
				Mangalore	2	1
03.	KERALA	В	Entire area falling within		4	1
			the State of Kerala and Union Territory of	Cochin	4	1
			Lakshadeep and Minicoy	Kozhikode	4	1
			F	Thrissur	4	1
				Kannur	4	1
04.	Tamilnadu	А	Entire area falling within	Chennai	6	1
	(incl		the State of Tamilnadu and	Tiruchira-	4	1
	Chennai)		Union Territory of	ppalli		
			Pondichery	Pondicherry	2	1
				Madurai	4	1
				Coimbatore	4	1

WEST ZONE

S1	Licensed Service Area				No. of days of drive test	
	and categ	ory			Voice	Data
01.	Maha-	Α	Entire area falling within	Pune	4	1
	rashtra		the State of Maharashtra	Nagpur	4	1
			and Union Territory of Goa,	Aurangabad	4	1
			excluding areas covered by	Nashik	4	1
			Mumbai Metro Service Area.	Goa	2	1
02.	Mumbai	Metr	Local Areas served by	Mumbai	6	1
		0	Mumbai, New Mumbai and	· 0		
			Kalyan Telephone	,		
			Exchanges	Navi Mumbai	4	1
03.	Gujarat	Α	Entire area falling within	Ahmedabad	4	1
			the State of Gujarat and	Vadodara	4	1
			Union Territory of Daman	Surat	4	1
			and Diu, Silvassa (Dadra & Nagar Haveli).	Rajkot	4	1
04.	Madhya	В	Entire area falling within	Bhopal	4	1
	Pradesh		the re-organised State of	Gwalior	4	1

	Pradesh as well as	Indore	4	1
the State	of Chattisgarh.	Jabalpur	4	1
		Raipur	4	1
		Durg-	4	1
		Bhilainagar		

EAST ZONE

S1	Licensed Service Area and category		Areas covered	Cities to be covered	No. of days of drive test	
					Voice	Data
01.	Assam	С	Entire area falling within the State of Assam.	Guwahati	4	1
02.	North East	С	Entire area falling within the	Aizwal	2	1
			States of Arunachal Pradesh,	Kohima	2	1
			Meghalaya, Mizoram,	Agartala	2	1
			Nagaland, Manipur and	Imphal	2	1
			Tripura.	Shillong	2	1
				Itanagar	2	1
03.	West Bengal and Andaman& Nicobar	В	Entire area falling within the Union Territory of Andaman & Nicobar Islands and area falling within the State of West Bengal and the State of	Asansol	4	1
	Meobal		Sikkim excluding the areas covered by Kolkata Metro Service Area.	Gangtok	2	1
04.	Bihar	C	Entire area falling within the	Patna	4	1
	& Jharkhand		re-organised State of Bihar and State of Jharkhand.	Jamshedpur	4	1
				Dhanbad	4	1
				Ranchi	4	1
05.	Orissa	С	Entire area falling within the State of Orissa.	Bhubaneswar	4	1
06.	Kolkata	Met ro	Local Areas served by Calcutta Telephones.	Kolkata	6	1

DETAILS OF ZONE-WISE SERVICE AREA AND SERVICE PROVIDERS PROVIDING 2G, 3G, 4G AND 4G VOLTE SERVICES

NORTH ZONE

S1	License Service A and categ	rea	Name of licensees (Service Provider)	Name of Service Provider 3G Services	Name of Service Provider 4G Services	Name of Service Provider 4G VOLTE Services
01.	Jammu &	С	BSNL	Aircel	Reliance Jio	Reliance Jio
	Kashmir		Bharti Airtel	Bharti Airtel		
			Aircel	BSNL		
			Reliance Comm.	IDEA Cellular		
			Vodafone	Reliance Comm		
			IDEA Cellular			
02.	Himachal	С	Bharti Airtel	Bharti Airtel	Bharti Airtel	Reliance Jio
	Pradesh		IDEA Cellular	BSNL	IDEA Cellular	
			Reliance Telecom	Idea Cellular	Reliance Comm	
			BSNL	Reliance Telecom Ltd.	Reliance Jio	
			Aircel			
			Tata Teleservices			
			Reliance Comm.			
			Vodafone			
03.	Rajasthan	than B	Vodafone	Bharti Airtel	Bharti Airtel	Reliance Jio
			BSNL	BSNL	Reliance	
			IDEA Cellular	Reliance Comm	Reliance Jio	
			Bharti Airtel	Tata Teleservices	Vodafone	
			Reliance Comm.	Vodafone		
			Tata Teleservices			
			Sistema Shyam Teleservices Ltd			
			Aircel			
04.	Punjab	В	Spice Comm.(Idea)	Aircel	Bharti Airtel	Reliance Jio
			Quadrant (HFCL)	Bharti Airtel	IDEA Cellular	
			Bharti Airtel	BSNL	Reliance Comm	
			Vodafone	Idea Cellular	Reliance Jio	
			BSNL	Reliance Comm		
			Reliance Comm	Tata		
			Tata teleservices			
			Aircel			
05.	Haryana	В	IDEA Cellular	Bharti Airtel	Bharti Airtel	Reliance Jio
			Vodafone	BSNL	IDEA Cellular	
			BSNL	Idea Cellular	Reliance Jio	

			Bharti Airtel Limited	Tata Teleservices	Vodafone	
			Reliance Comm	Vodafone		
			Tata teleservices			
			Aircel			
			Videocon			
06.	Delhi	Met	Bharti Airtel	Bharti Airtel	Bharti Airtel	Reliance Jio
		ro	Vodafone	IDEA Cellular	Reliance Comm	
			MTNL	MTNL	Reliance Jio	
			IDEA Cellular	Reliance Comm	Vodafone	
			Tata Teleservices	Vodafone		
			Reliance Comm			
			Aircel			
			Sistema Shyam Teleservices Ltd			
07.	Uttar	В	Bharti Airtel	Aircel	Bharti Airtel	Reliance Jio
	Pradesh –		Vodafone	Bharti Airtel	Reliance Jio	
	East		IDEA Cellular	BSNL	Telenor	
			BSNL	IDEA Cellular	Vodafone	
			Reliance Comm.	Vodafone		
			Tata Teleservices			
			Aircel			
			Telenor			
08.	Uttar	В	Vodafone	Bharti Airtel	Bharti Airtel	Reliance Jio
	Pradesh-		IDEA Cellular	BSNL	Reliance Jio	
	West		BSNL	Idea Cellular	Telenor	
			Bharti Airtel	Tata	Vodafone	
			Reliance Comm	Vodafone		
			Tata Teleservices			
			Aircel			
			Sistema Shyam Teleservices Ltd			
			Telenor			

SOUTH ZONE

S1	Licensed Service Area and category		Name of Service Provider 2G Services	Name of Service Provider 3G Services	Name of Service Provider 4G Services	Name of Service Provider 4G VOLTE Services
01.	Andhra	Α	IDEA Cellular	Aircel	Bharti Airtel	Reliance Jio
	Pradesh		Bharti Airtel	Bharti Airtel	IDEA Cellular	
			BSNL	BSNL	Reliance Jio	
			Vodafone	Idea Cellular	Telenor	
			RCOM			
			Aircel			
			Tata Teleservices			
			Telewings			

02. Karnataka		A	Bharti Airtel Limited	Aircel	Bharti Airtel	Reliance Jio
			BSNL	Bharti Airtel Ltd.	IDEA Cellular	
			Vodafone	BSNL	Reliance Jio	
			Sistema Shyam	Tata Teleservices	Vodafone	
			RCOM	Vodafone		
			Aircel			
			IDEA Cellular			
			Tata Teleservices			
03.	Kerala	В	IDEA Cellular	Aircel	Bharti Airtel	Reliance Jio
			Vodafone	BSNL	IDEA Cellular	
			BSNL	IDEA Cellular Ltd.	Reliance Jio	
			Bharti Airtel	Tata Teleservices	Vodafone	
			Tata Teleservices	Vodafone		
			RCOM			
			Sistema Shyam			
			Aircel			
04.	Tamilnadu	Α	Vodafone	Aircel	Bharti Airtel Ltd.	Reliance Jio
	(incl Chennai)		Aircel	Airtel	IDEA Cellular	
			IDEA Cellular	BSNL	Reliance Jio	
			BSNL	Vodafone	Vodafone	
			Bharti Airtel			
			RCOM			
			Sistema Shyam			
			Tata Teleservices			

WEST ZONE

S1	Licensed Service Area and category		Name of Service Provider 2G Services	Name of Service Provider 3G Services	Name of Service Provider 4G Services	Name of Service Provider 4G VOLTE Services
01.	Maha- A rashtra		Vodafone	Bharti Airtel Ltd.	Bharti Airtel Ltd.	Reliance Jio
	rabilita		IDEA Cellular	BSNL	IDEA Cellular	
			BSNL	IDEA Cellular	Reliance Jio	
			Bharti Airtel Limited	Tata	Telenor	
			Reliance	Vodafone	Vodafone	
			Tata teleservices			
			Aircel			
			Telewings			
02.	Mumbai Metr o		Vodafone	AIRTEL	Bharti Airtel Ltd.	Reliance Jio
			MTNL	MTNL	Reliance	

			Bharti Airtel Limited	Reliance Communication Ltd.	Reliance Jio	
			Reliance Comm	VODAFONE	Vodafone	
			Tata teleservices			
			IDEA Cellular			
			Aircel			
03.	Gujarat	Α	Vodafone	AIRTEL	Bharti Airtel Ltd.	Reliance Jio
			IDEA Cellular	BSNL	Reliance Jio	
			BSNL	Idea Cellular Ltd.	Telenor	
			Bharti Airtel Limited	ТАТА	Vodafone	
			Reliance Comm	VODAFONE		
			Tata teleservices			
			Aircel			
			Telewings			
			Videocon			
			Sistema Shyam Teleservices Ltd			
04.	Madhya Pradesh	В	IDEA Cellular	Bharti Airtel Ltd.	Bharti Airtel Ltd.	Reliance Jio
			Reliance	BSNL	IDEA Cellular	
			BSNL - MP	Idea Cellular Ltd.	Reliance	
			Bharti Airtel	Reliance	Reliance Jio	
			Limited	Telecom Ltd.		
			Tata Teleservices	Tata		
				Teleservices		
			Videocon			
			Aircel			
			Vodafone			

EAST ZONE

S1	Licensed Service Area and category		and Service Service		Name of Service Provider 4G Services	Name of Service Provider 4G VOLTE Services	
01.	Assam C		Bharti Airtel	Aircel	Reliance	Reliance Jio	
			BSNL	Bharti Airtel	Reliance Jio		
			Aircel	BSNL	Telenor		
			Reliance Telecom	Reliance Telecom Ltd.	Vodafone		
			Vodafone	Vodafone			
			IDEA Cellular				
02.	North East	С	BSNL	aircel	Bharti Airtel	Reliance Jio	
			Bharti Airtel	Bharti Airtel	IDEA Cellular		
			Reliance Telecom	BSNL	Reliance		
			Aircel	Reliance Telecom Ltd.	Reliance Jio		
			Vodafone	Vodafone	Vodafone		

			IDEA Cellular			
03.	West Bengal	В	Sistema Shyam Teleservices Ltd	AIRCEL	Bharti Airtel	Reliance Jio
	and Andaman&		Bharti Airtel	Bharti Airtel	Reliance	
	Nicobar		Reliance Telecom	BSNL	Reliance Jio	
			BSNL	Reliance Telecom Ltd.	Vodafone	
			Tata Teleservices	Vodafone		
			Vodafone			
			Aircel			
			IDEA Cellular			
04.	Bihar &	C	Reliance	Aircel	Bharti Airtel	Reliance Jio
	Jharkhand		BSNL	Bharti Airtel	Reliance	
			IDEA Cellular	BSNL	Reliance Jio	
			Bharti Airtel	Reliance	Telenor	
			Limited	Telecom Ltd.		
			Tata teleservices			
			Telewings			
			Vodafone			
			Aircel			
05.	Orissa	C	Reliance	Aircel	Bharti Airtel	Reliance Jio
			BSNL	Bharti Airtel	IDEA Cellular	
			Bharti Airtel	BSNL	Reliance	
			Vodafone	Reliance Telecom Ltd.	Reliance Jio	
			Tata Teleservices		Vodafone	
			IDEA Cellular			
			Aircel			
06.	Kolkata	Met	Bharti Airtel	Aircel	Bharti Airtel	Reliance Jio
		ro	Vodafone	Bharti Airtel	Reliance	
			BSNL	BSNL	Reliance Jio	
			Reliance	IDEA Cellular	Vodafone	
			IDEA Cellular	Reliance Telecom Ltd.		
			Aircel	Vodafone		
			Tata Teleservices			
			Sistema Shyam			
			Teleservices Ltd.			

Annexure 4

PRE-CONTRACT INTEGRITY PACT

<u>General</u>

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) of the Second Part.

WHEREAS the AUTHORITY proposes to get the work for assessment of Quality of Service of Cellular Mobile Telephone Service Providers through drive tests in select cities, highways and railway routes and the BIDDER is willing to offer/has offered its services for conducting assessment of quality of service provided by the telecom service providers through drive tests 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, and the "Standards of Quality of Service for Wireless Data Services Regulations , 2012 dated 4th December 2012 (26 of 2012).

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 AUTHORITY, 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 AUTHORITY 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 AUTHORITY, 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 AUTHORITY as part of the business

relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The BIDER 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. <u>Previous Transgression</u>

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 AUTHORITY 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 AUTHORITY 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 AUTHORITY 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 AUTHORITY, 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	
AUTI	HORITY		BIDDER
Nam	e of the Officer		CHIEF EXECUTIVE OFFICER
Desi	gnation		
TRAI			
<u>Witn</u>	<u>iess</u>		<u>Witness</u>
1.		1.	
2.		2.	