Sub: Clarifications on requests received with respect to Expression of Interest (EOI) for Random real time monitoring and Audit & Assessment of Quality of Service of Service Providers.

Dated: 21.02.2012

Various requests for clarification received are replied below:

1. Kindly provide us a rough estimate of No. of Local units and Mobile units.

   Clarification: The details are already given in EOI (clause 2.3.1).

2. Kindly explain as to who will be responsible for providing the Static IP's and who bear the expenditure for this.

   Clarification: The solution is sought on managed service basis and all the requirements for the solution are to be catered to accordingly.

3. Kindly clarify if Global Roaming QOS in India is envisaged in the EOI.

   Clarification: The list of parameters on which QOS is to be monitored is already given in EOI. However the solution can also suggest additional parameters that could be monitored.

4. For Drive Test and Bench Marking kindly explain as to how many service providers are to be covered.

   Clarification: The scope of work already specifies the Service Providers to be covered.

5. Also please clarify the list of services e.g. Voice, data, video, MOS etc is to be assessed in the EOI.

   Clarification: The list of parameters on which QOS is to be monitored is already given in EOI. However the solution can also suggest additional parameters that could be monitored.

6. Kindly clarify how many Phones are required to be used for Drive Test Tool.

   Clarification: The solution is to be provided by the bidder to meet the requirements.

7. Kindly give rough estimate of the No. of Tools envisaged in the EOI.

Clarification: The solution is to be provided by the bidder to meet the requirements.

8. Kindly clarify if same agency is required to have dedicated call centres for the QOS activity or if it can be outsourced from outside agency.

   Clarification: The managed solution could be provided on their own or through a consortium or through sub-contracting, but the solution should clearly bring out all their roles and responsibilities.

9. Kindly clarify and give quantity estimate with Back haul connectivity, core connectivity and end to end set up requirements to decide the interfaces.

   Clarification: The solution is to be provided by the bidder to meet the requirements.

10. We are attaching herewith the List of Tools which we feel are required for the QOS activity. Kindly confirm the suitability of these test equipments in the EOI activity.

    Clarification: The details need to be submitted with EOI.

11. Please elaborate the meaning of real time as we believe normally such solutions are near real time wherein monitoring is done on 5 min, 15min, 1 hour, daily, weekly, monthly interval basis.

    Clarification: Real time means near real time as per the best industry practice. However, the solution could explain the same.

12. 1) Is Virtual Subscribers Probe a tool which can simulate multiple service scenarios within a Radio network and record the performance of such services? Please elaborate on how agents/ probes will tap information from the BTS sites?

    2) Are these Virtual Probes required to connect to a central NMS?

    3) What are the KPIs associated with these probes?
    4) Is the scope to cover all the subscribers of India?
    5) What is the interface that these probes will tap on?

    Clarification: The solution is to be proposed by the bidder.

13. The performance reports, as required in this EOI, to be generated by the bidder shall be done after processing the data collected by the

OSS systems and the Customer Service tools (Trouble Ticketing). Is this understanding correct?

Clarification: Yes.

14. Live measurement clause and clause 2.3.1 all point towards a probe solution which shall be implemented at all the Service Providers regulated by TRAI. Are these probes to be assumed different from Virtual Subscriber probes mentioned at clause no 1.4.1.

Clarification: The solution to meet the EOI requirements are to be proposed by the bidder.

15. Request that TRAI provide volumetric for Random customer feedback exercise. The Call centre equipment or the agents can be designed accordingly.

Clarification: Presently following activities are being done:

(a) Telephonic interview amongst a sample of subscribers for billing complaints in a random list (100 subscribers per service provider for each service in a licensed service area).

(b) Termination/Closure of service for Basic Service (Wireline) and new connection for Broadband Service: The sampling frame is for Termination/Closure of service for Basic Service and Point of Presence/ ISP Node of Broadband Service Provider. Here, the total sample size (10% of the applicants in the previous month) for different type of requests received is randomly selected from the registers to make check back calls.

(c) Audit check of fault complaints: Here the service provider is required to provide the details of the fault for the month previous to the audit month for Landline and Broadband. From the list of these complainants (10% or 30 per service provider for the concerned exchange or ISP Node, whichever is less) sample is drawn randomly to make check back calls.

(d) Check of Level 1 Services such as police, fire, ambulance (Emergency services) in the case of both Mobile service providers and basic telephone service providers. The total sample size (300 per circle per half year) is equally distributed among the different SDCAs visited.

(e) Inter Operator Call Assessment: A sample of 2 X 50 test calls per service provider within the licensed service area are made at different point of time to the free test numbers of another service provider for basic and cellular mobile.

(f) Call centre accessibility is measured through a sample of 2 X 50 calls per service provider made at different point of time to the call centre of each service provider from each licensed service area for basic telephone service (wireline) and cellular mobile telephone service.

The solution could suggest further improvements.

16. Parameters mentioned here shall be pulled from Telecom Service Providers' system to the Bidders system. Will this be a flat file dump which shall be made available to the bidder by the Telecom operators on a daily basis?

Clarification: The solution is to be proposed by the bidder.

17. How shall the bidder get this fault tickets, fault restoration and service provisioning data from Service provider? Will this a file dump by the Service Provider to a FTP location?

Clarification: The solution is to be proposed by the bidder.

18. The data points in terms of no of probes and incoming data are not clear. In view of the same, it may not be possible to give itemized bill of material now. Instead, a list of items required to complete this project can be provided. Please confirm.

Clarification: No the scope of work clearly mentions the area of coverage and the results expected, hence detailed item list is required with detailed solution proposed.

19. The data for PMRs is submitted by all Service providers on a monthly basis. Is this data different from the live data which is proposed to be captured from Service Providers network? It is understood from the EOI that live reporting of performance parameters is the essence. Please clarify.

Clarification: Presently the performance monitoring reports are being submitted by the service providers in hard copy and through e-mail to TRAI. It is proposed that the complete month data from server or MSC or NOC of service providers shall be taken directly into the server at TRAI by the agency for processing or the raw PMR data should be collected of each service provider for each circle of its operation on monthly basis and Pushed/Loaded to the central server of TRAI for post processing, before 7th of the following month. The PMR reports as per the present format or as per the format modified by TRAI shall be prepared by the agency after processing of such obtained data/information.

The solution could suggest further improvements.

20. Live assessment is to be done with help of Network probes or it is to be done onsite for each operator as hinted at clause 2.5.3 another possibility to take data from Network monitoring system of all the Service providers. Please elaborate on the data collection for parameters to be reported on.

   Clarification: This has already been clarified in clause 2.5.2 and 2.5.3

21. Monthly audits as Service providers are assumed to be verification exercise of the provided by them to TRAI on monthly basis. Is this data to be verified on 100% basis or sample basis?

   Clarification: Already mentioned clearly that it is to be done on sample basis.

22. Does this monthly audit also involves various parameters and KPIs mentioned at clause no. 1.2(i, ii & iii) tables?

   Clarification: Yes, it does.

23. Which entity shall be responsible for connectivity to TRAI data centre and Service Provider's data centre/IT Systems?

   Clarification: The bidder shall be responsible for it.

24. Are the probes for live performance collection to be installed only for the mobile broadband network or for fixed line broadband network as well?

   Clarification: clause 2.3.2 already specifies this.

25. The reports on data collected from trouble ticketing/ helpdesk tools of the Service providers shall be offline. Hence reports generated on these parameters like billing accuracy or provisioning time taken shall be dependent upon the delay in getting this data. Is this understanding correct?

   Clarification: Yes.

26. 1) Does TRAI wishes to have a zonal system or a central system to meet the requirements of the EOI?

2) In case of zonal deployment, will the servers be distributed physically zone wise (geographical locations)? Please confirm.

Clarification: Clause 1.3 (page 11) shall be referred to. The solution is to be proposed by the bidder.

27. During the audit exercise, does TRAI envisage generating of raw CDR data for billing data verification like proper discounting for faults, customer plans were correctly applied or not? If yes, please elaborate on this requirement.

Clarification: The solution could be proposed.

28. What would be overall deployment strategy for this solution? Would it start at one for all subscribers and all circles or would it be phased implementation?

Clarification: A detailed implementation plan may be proposed.

29. In India most of service providers follow outsourced managed service mode of operation. So is it fair to assume that this system will also integrate with various regional NOCs of these managed service partners or would it purely rely on the virtual probes for its feed?

Clarification: The solution is to be proposed by the bidder.

30. What would be system providing the date feed to this solution?

   a)   Virtual probes
   b)   Billing System
   c)   Customer care Systems
   d)   Trouble Management Systems
   e)   Drive Test Reports
   f)   MS Partner NOCs of MIS Reports submitted to TRAI by Various operators?

Clarification: The solution is to be proposed by the bidder.

31. Our understanding of sample field deployments is that it will be on paid basis as it would involve actual equipment. Please confirm if our understanding is correct.

Clarification: No, it will be on trial basis (without any cost) for evaluation purposes.

32. Please provide volumetric of number of BTSs deployed in each LSA. This is needed to work out the solution and managed services model from the human resources needed.

Clarification: The solution to meet the EOI requirements are to be proposed by the bidder.

33. To work out the solution, redundancy, manpower etc. we would request TRAI to give an indication of the budgetary estimate.

Clarification: The solution to meet the EOI requirements are to be proposed by the bidder.

34. Considering that all LSAs and all SPs are to be covered, please indicate the timelines for project completion.

Clarification: The implementation schedule with timelines is to be submitted by the bidder.

35. With reference to clause 1.3 (i), kindly provide clarification as to whether Broadband referred here is Wireline service or wireless service like dongles etc. or both? Kindly clarify this in case of Random real time monitoring as well as Audit and Assessment of Quality of Service

Clarification: The Broadband referred is Wireline. However the solution can propose both wireline and wireless.

36. With reference to clause 2.3.1 (Page No. 22, line 1&2) – EOI mentions "At least 1% of the total BTS in each License service area (circle) shall be covered over a period of 90 days"

- Does this refer to 1% for each operator or 1% of total BTS in the circle?

- Does the audit agency need to monitor these 1% BTSs only during Time Consistent Busy Hour (TCBH) for 3 days or continuously for every hour for 3 days? Further, kindly elaborate on the number of samples to be collected from each BTS during these 3 days?

- Kindly elaborate on dispersion (geographical coverage) of these 1% BTSs selected for real time monitoring. Also clarification is required on selection of these 1% BTSs – whether they will be left on the discretion of the audit agency or will a list be provided by the TRAI to the Audit Agency

Clarification: It is 1% of the total BTS in the license service area. The bidder has to propose a suitable comprehensive solution.

37. Please advice on the split between fixed/stationary and moving/nomadic probes (if any) as required (clause 2.3.1).

Clarification: The solution is to be provided by the bidder to meet the requirements.

38. With reference to clause 2.3.8, kindly indicate on the number of such panels required – Are these panels going to be setup Zone wise or circle wise or operator wise?

Clarification: The solution is to be proposed by the bidder.

39. With reference to clause 2.3.10, kindly provide clarity on the duration of "programmable time".

Clarification: The data is to be preserved for a maximum period of four months.

40. With reference to clause 2.5, kindly clarify if PMR preparation activity is to be conducted for all the 3 service -wireline, cellular and broadband or only for Cellular mobile service?

In case of Wireline & Broadband currently the PMR are being reported on quarterly basis for both network and non-network parameters. The EOI states that the audit agency needs to submit PMRs to TRAI on a monthly basis. Kindly clarify if for wireline & broadband, it has to be submitted on a quarterly basis?

For BSNL wireline & broadband, as per the current QoS norms an audit agency has to cover 5% of exchanges for wireline and 10% of POPs for broadband. In this case PMR

generation for entire circle would not be feasible. Kindly clarify on the same?

Clarification: At present, the monthly PMR is for network parameters for cellular mobile services and quarterly PMR for basic, broadband and customer centric parameters for cellular mobile services.

41. With reference to clause 2.5.1, currently, for cellular mobile services data pertaining to network parameters are submitted on a monthly basis and non-network parameters are submitted on a quarterly basis. Does the audit agency need to generate PMR from data pertaining to both network and non-network parameters on a monthly basis or is it only for network parameters?

    Clarification: Already clarified at sl. no. 40.

42. With reference to clause 2.5.3, it is observed that many of the operators do not store raw data at their NOC for more than a fortnight and transfer it to an archive/store room. In this case it would be difficult to obtain raw data for entire month from the server. Has TRAI issued a directive to the service providers to maintain this data for the entire month?

    Clarification: The solution is to be proposed by the bidder.

43. With reference to clause 2.5.4(ii), kindly clarify if these 25 drive test refer to 25 SIMs in each zone every quarter?

    Clarification: Yes.

44. Is TRAI expecting Bidder to develop custom application for the TRAI's internal monitoring purpose?

    Clarification: The report formats are required to be provided to meet the requirements of EOI.

45. Please provide different tests to be done during drive test.

    Clarification: Different tests are to be suggested by the bidder for comprehensive RF evaluations.