

Consultation Paper No. 15 /2012



Telecom Regulatory Authority of India



Consultation Paper
on
Review of
The Quality of Service (Code of Practice for Metering
& Billing Accuracy) Regulations, 2006

27th November, 2012

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New Delhi – 110002, India

Stakeholders are requested to send their comments, preferably in electronic form, by 17th December, 2012 and counter comments by 24th December, 2012 on email Id advqos@traigov.in. For any clarification /information, Shri A. Robert J. Ravi, Advisor (CI & QoS) may be contacted at Tel. No. +91-11-23230404, Fax: +91-11-23213036.

CHAPTER-1 INTRODUCTION

1.1 Issues in Billing of telecom consumers are of concern to TRAI. In order to protect the interest of consumers with regard to metering and billing accuracy, TRAI had notified the Quality of Service (Code of Practice for Metering and Billing Accuracy) Regulation 2006 on 21st March, 2006. A copy of these regulations is placed at **Appendix.I**. These regulations contain a Code of Practice for Metering and Billing Accuracy, which every Basic Service Provider and Cellular Mobile Service Provider has to comply with. These regulations also provide, for TRAI to notify a panel of auditors to audit the Metering and Billing System of service providers to ensure that the service providers comply with the Code of Practice. The service providers have to appoint any one of the Auditor from the notified panel by TRAI and has to submit an audit report every year by 30th of June. The service providers shall take corrective action on the inadequacies, if any, pointed out by the audit agency and an Action Taken Report thereon shall be filed with TRAI not later than 30th September of every year. The charges for such auditing of the billing system shall be borne by the service providers.

1.2 The audit of the metering and billing system, in pursuance of these regulations, has been continuing since 2006-07. Initially TRAI had notified a panel of seven auditors during the year 2006. The panel was further enlarged by notifying seven more auditors during the year 2007. TRAI had notified a fresh panel of auditors during the year 2011. The implementation aspects of metering and billing audit are contained in the Terms of Reference (TOR) seeking Expression of Interest for Empanelment of the Auditors. The relevant provisions in the TOR are reproduced below:

“The audit Agency shall perform the audit to check compliances of the service provider to the code of practice for metering and billing accuracy laid down in the Quality of Service (Code of Practice for Metering and

Billing Accuracy) Regulations, 2006 and based on its assessment audit Agency shall prepare an audit report containing :-

- *Details of tariff plans audited;*
- *Separate audit report for each of the licensed service area for which audit Agency has been engaged by the service provider;*
- *The detailed methodology for carrying out the audit. The methodology should cover all points stated in the Terms of Reference.*
- *Comments on compliance, deficiency or an observation with respect to each of the code/quality parameter laid down in the Code for Practice for metering and billing accuracy;*
- *Certificate from the Agency that he has received all information and explanation from the service provider, necessary for the purpose of audit;*
- *Comments of the Agency about authenticity of the information received from the service provider for carrying out the audit.*

The audit Agency and its staff must carry out the tasks for which they have been accredited with the highest degree of professional integrity and technical competence. They must be free from all pressures and inducements and possess personal integrity beyond doubt, particularly financial, which might influence their judgment or the results of any assessment, especially from persons or groups of persons with an interest in such results.

The impartiality of inspection staff must be guaranteed. Their remuneration must not depend on the number of assessments carried out or on the results of such assessments. The Agency is similarly expected to ensure the impartiality of any contract staff.

The staff of the Agency is bound to observe professional secrecy with regard to all information gained in carrying out its tasks, although this does not preclude information-sharing with TRAI.

Each service provider is responsible to bear the costs of auditing of its metering and billing system by the empanelled Agency.

The chosen Agency will notify TRAI before it begins the auditing process (on a service by service basis) to enable tracking of the implementation of the audit of the Metering and Billing System of service providers.

A new Agency shall be required to obtain from the service provider details of any other Agency engaged by the service provider earlier for such auditing and of any unresolved or outstanding matters, which will include category 1, 2 and 3 items as mentioned below.

Areas of concern identified by an Agency during the assessment of a service provider's Metering and Billing System against the Code of Practice for Metering and Billing Accuracy may come to light in the form of:

- A non-compliance ~ an instance of failure to comply with an established requirement. The nature of the failure and the requirement in question need to be made explicit in documenting any non-compliance.*
- A Deficiency ~ an instance of a lack of adequacy in meeting a requirement. An example might be where a billing system has no facility to detect duplication of records for the same service usage. This would be likely to lead to a breach of Code of Practice for Metering and Billing Accuracy, but the absence of a detection facility only causes a problem when such duplication occurs.*
- An observation ~ a comment about something that has been seen during an assessment, but is not considered sufficiently serious to be a deficiency. However, it may possibly lead to corrective and / or preventative action.*

These will result in matters being raised, which will be categorised in three categories as described below.

Category 1:

- An important matter preventing the issue or continuance of approval for which corrective action must be undertaken urgently. In view of the grave consequences of a Category 1 matter, it is*

expected that a service provider will resolve it as a matter of the utmost importance.

- *In any event a detailed corrective action plan must be agreed within one month and put into effect immediately.*
- *All Category 1 matters for an existing approval are to be reported by the Agency to TRAI.*

Category 2:

- *A matter of concern, which is a condition of approval and which is to be resolved within a period, agreed with the Agency but not exceeding twelve months.*
- *In any event a detailed corrective action plan must be agreed and put into effect within three-months.*

Category 3:

- *A matter worthy of consideration by the service provider, possibly leading to corrective and / or preventative action, but not of sufficient importance to warrant Category 1 or 2 status.*

The auditing agency shall: -

- Undertake the verifications of billing and charging of telecom operators both for prepaid and postpaid customers in accordance with the Code of Practice for Metering and Billing Accuracy in a representative manner within the overall sample size.

-Specifically, the auditing Agency shall evaluate inter alia the correctness of the following: -

- *In generation process of the Call Data Records (CDR) - raw CDRs.*
- *Of the entries in the direction table which is used for rating the raw CDRs.*
- *Of the rated CDR vis-à-vis the rate applied, duration mentioned, origination and destination codes.*
- *In charging of VAS services to the subscribers.*
- *In charging of the roaming services to the mobile subscribers.*

- *The tariff plans having subscribers more than ten percent of the total subscribers will be audited in each licensed service area. The number of sample size to be checked in each tariff plan verification should be such so as to achieve a confidence level of ninety five percent at a confidence interval of three percent. In addition, 3 prepaid tariff plans and two postpaid tariff plans launched during the year of audit that has the largest number of subscribers shall also be covered.*
- *The Audit Agency will take the raw CDRs post-mediated and unrated and process the same to generate the bill and then verify with already generated bill for any discrepancy. The CDRs of last three months are to be processed. The CDRs to be taken in respect of the new plans should cover the first three months of launch of the plan. In all cases metering and mediation process to be checked first by sample test calls to ascertain that metering and mediation process is accurate and no systemic deficiency is noticed. After doing the functional testing of the mediation process/software, unrated post-mediated CDRs may be used for generating the bills for audit analysis.*
- *In the case of Prepaid, rated CDRs are produced by the IN system. In the absence of any un-rated CDRs, sample test calls shall be made using test SIM Cards/ telephone for every possible charge scenario and corresponding accuracy of rating procedures by the IN system may be established. Backward reconciliation of rated CDRs from IN system shall be done to further establish correctness of rating procedures.*
- *The audit agency shall also undertake backward reconciliation of billing complaints both for post-paid and pre-paid to establish correctness of rating procedures.*
- *The Audit Agency shall analyse the discrepancy if detected, and find out the root cause of the same.*

Discrepancy Analysis:

The discrepancy analysis is done by execution of the inference engine that performs analysis of the rated CDRs in order to establish causes of the discrepancy based on CDR, subscriber and pricing plan data.

Bill level discrepancy analysis:

After several cycles of event level discrepancy analysis and database adjustment, when all the event level discrepancies are taken care of, the next step is of bill level discrepancy. The bill level discrepancy reports will be produced & analysed by the audit Agency.

Verification of corrective actions:

In this important stage, a verification of successful implementation of the corrective action is performed."

1.3 The audit of the metering and billing system has helped the service providers in identifying and addressing the systemic deficiencies in their billing system. At the same time the audit has revealed several instances of overcharging and also instances of undercharging. The major issues and concerns arising out of the audit of the metering and billing system are discussed in Chapter-2. The issues for consultation are given in Chapter-3.

CHAPTER-2

ISSUES ARISING OUT OF IMPLEMENTATION OF THE QUALITY OF SERVICE (CODE OF PRACTICE FOR METERING & BILLING ACCURACY) REGULATIONS, 2012

2.1 During implementation of the Quality of Service (Code of Practice for Metering and Billing Accuracy) Regulations, 2006 the following issues have come to the notice of TRAI, which necessitate the review of the implementation of the regulations:

2.2 **Delay in submission of audit reports and action taken reports:** As per the provisions of the Quality of Service (Code of Practice for Metering and Billing Accuracy) Regulations, 2006, the audit reports have to be submitted to TRAI by service providers by 30th June of every year. It is seen that in a number of cases the service providers have submitted audit reports late and only after continuous persuasion by TRAI. From the discussions with the Auditors, on the delayed submission of audit reports, it emerged that the main reasons for such delays are on account of late submission of the required CDRs for the selected plans and supporting documents, to the auditors by the service providers. It is felt that a suitable financial disincentive is required to be imposed on service providers for such delay in submitting of audit reports to TRAI. It is proposed that financial disincentives at the rate of Rs.50000/- may be imposed for each day of delay in submission of audit reports.

Question 1: What are your views on imposing financial disincentives for delay in submitting audit reports of the metering and billing system and what should be the quantum of such financial disincentives? Please give your comments with justification.

2.3 **Delay in submission of Action Taken Reports:** As per the provisions of the Quality of Service (Code of Practice for Metering and Billing Accuracy) Regulations, 2006, every service provider has to submit to TRAI

by 30th September of every year an Action Taken Report on the audit observations or inadequacies, if any, pointed out by the auditor in the audit reports. Similar to the audit reports, it is also seen that in some cases there have been inordinate delay in submitting the Action Taken Report (ATR) to TRAI. It is also felt that a suitable financial disincentive is required to be imposed on service providers for such delayed submission of the Action Taken Reports. It is proposed that financial disincentives at the rate of Rs.50000/- may be imposed for each day of delay in submitting the Action Taken Reports. In case, the service provider provides false information in the ATR or the ATR is incomplete, it is proposed that it shall be made liable to pay an amount, by way of financial disincentive, not exceeding rupees ten lakh per ATR for which such report has been furnished.

Question 2: What are your views on imposing financial disincentives for delay in submission of Action Taken Reports on audit observations of the metering and billing system and for providing false information or incomplete information and what should be the quantum of such financial disincentives? Please give your comments with justification.

2.4 **Non-refund of overcharged amounts to affected customers:** It has been observed from the audit reports and action taken reports submitted by service providers that refunds were not made to affected customers in some cases of overcharging observed by the auditor and acknowledged by the service provider. In some cases, the Authority had to issue Show Cause Notices to the defaulting service provider and the matter had to be pursued by TRAI with the service providers. Service providers have no right to charge the customers, in excess of the charge agreed to with the customers as per the tariff plan or STV subscribed by the customers. Non-refund of excess charges, if any, levied from the customers amounts to undue enrichment.

2.5 One of the main reasons for the reluctance on the part of service providers to refund the excess charges to affected customers was attributed to time, energy and cost involved in such refunds. In some cases the time

lag between occurrence of the overcharged event and identification of the problem makes it difficult for the service providers. Generally, as and when overcharging is detected, rectification of the problem is done in the billing system. However, for identifying the customers who were affected by overcharging, the Call Data Records (CDR) has to be retrieved from the system. Usually the CDRs are live in the billing system for three to six months and subsequently they are archived. For identifying the affected customers whose CDRs were archived, the service providers have to reload the same in the system. This process involves time, energy and cost.

2.6 In most of the cases, such overcharging and non-refund of such overcharges to affected customers are brought to light only when the audit reports and Action Taken Reports are submitted. During that stage, when the matter is taken up with the service providers it is generally observed that there is more reluctance to refund the excess charges levied as the exercise involves more time and effort. By the time the audit reports are filed, the CDRs are archived from the billing system and these are required to be reloaded on to the system. The auditor also normally takes one month to audit the CDRs after the same is provided by the service providers. If the instance of overcharging was observed to be more than six months, the CDRs for such period would have to be reloaded in the system. Identifying such affected customers would be tedious process. For addressing such issues, it is felt that the frequency of audit of these CDRs needs to be increased.

2.7 Moreover the CDRs for the last three months of the selected sample size are taken and hence the audit of CDRs is not representative of the whole year. In case audit of these CDRs are done for more than once a year, say two times in a year – three months CDRs for each half year, the need for reloading of archived CDRs in the billing system may be considerably reduced and there will be timely refund of overcharges to the affected customers. Hence, it is felt that the audit of CDRs should be done at least twice a year - three months CDR pertaining to first half year (preferably the

first quarter of the financial year) and three months CDR pertaining to second half year (preferably the third quarter of the financial year). Also presently, the CDRs for the last three months of the financial year are taken for CDR audit and in many cases the filing of audit reports gets delayed. Rescheduling the period of CDR audit could avoid delay in submission of audit reports and timely refund of overcharged amounts to the affected customers.

2.8 In addition to increasing the frequency of audit of CDRs, it is also proposed that once a problem of overcharging is detected, the auditor should inform TRAI about such instances of overcharging. The auditor should submit a monthly progress report on the action taken by service providers on such observations of overcharging. This will ensure timely refund of overcharges and enable early resolution of any conflict in the audit observation between the auditor and service provider. The audit report should also contain the status of refunds to affected customers. It is also proposed that in case the refund to affected customers is not made within one month of the audit observation, in cases of overcharging, a financial disincentive equivalent to the amount of overcharged may be deposited with TRAI.

Question 3: What are your views on the proposal for audit of the CDRs for at least twice a year- three months CDR pertaining to first half year and three months CDR pertaining to second half year? Please give your comments with justification.

Question 4: What are your views on the proposal for simultaneous reporting of instances of overcharging to TRAI by the auditor, monthly progress report on the action taken by service providers on such audit observations and financial disincentives on delayed refund of such overcharged amounts? Please give your comments with justification.

2.9 **Incomplete or inadequate comments by service providers on audit observations:** It has been observed from the audit reports submitted by the service providers that against some of the audit observations, the

service provider has given incomplete or inadequate comments in the audit reports or the ATRs. In such cases, subsequently the service provider disputes the audit observation though they had the opportunity to examine the audit observation before inclusion of the same in the audit report. It is also seen that in a number of cases, the auditee comments do not contain details about information about the date of occurrence/rectification of the problem, number of customers affected and refunds effected. Hence, it is felt that the service providers should be mandated to undertake a thorough analysis of each audit observations and give detailed comments on each of the audit observation, including date of occurrence/rectification of the problem, number of customers affected and refunds effected. It is also proposed that financial disincentives of Rs.10 lakhs per incomplete audit report may be imposed for submitting incomplete audit report without adequate comments, as mentioned above.

Question 5: Do you support mandating service providers to undertake a thorough analysis of each audit observations and the requirement to furnish a detailed comment on each audit observation, as proposed above, including financial disincentives for submitting audit reports without adequate comments? Please give your comments with justification.

2.10 Quality of audit work: – It has been observed from the audit reports submitted by the service providers that in some cases the quality of the audit reports are not satisfactory. TRAI had discussed this issue with the empanelled auditors. During these discussions, it was pointed out that in most of the cases the appointment of auditor is being done by the service providers based on lowest bid submitted. The auditors tend to quote low so as to ensure that they are appointed for auditing. This seems to affect the quality of audit work performed by some of the auditors. Since the auditors are appointed by the service providers and the need to ensure that they are engaged as an auditor contribute to the quality of audit. As a solution to this problem, the auditors had suggested that TRAI may fix the

remuneration for the auditor and nominate the auditor for a service provider.

2.11 To ensure that the auditors function independently without any influence from the service providers, it was provided that the service providers shall not engage an auditor consecutively for more than two years. Initially when the audit of metering and billing system was introduced in 2006, few auditors managed to get the entire work from all the service providers and many auditors had no opportunity to undertake the audit work and gain experience in this new venture. To address this issue, restrictions were put on the auditors in contracting audit work in May, 2007. As per these restrictions, the auditor can take work of one category-A telecom service provider (having licence of >10 service area) and one category-B telecom service provider (having licence of <10 service area) or three category-B telecom service providers. In spite of these measures, some of the auditors have not got the opportunity to undertake the audit of metering and billing system and also there have been issues relating to the quality of audit. In this background, there appears to be a case for fixing of remuneration to the auditors and nomination of auditor. The service provider has to appoint the nominated auditor for its metering and billing audit and the auditor has to be paid fees as fixed by TRAI.

2.12 In the case of CAG audit the audit fee is fixed by the CAG. However, in the case of metering and billing audit, this is a specialized audit and there are only a few auditors who have expertise in this audit, unlike the financial audit. As such, there cannot be any linkage with the C&AG audit fees. As per discussions with the auditors, in order to have quality audit, the audit fee should be at least Rs.1 lakh per service area.

Question 6: Do you support nomination of auditor by TRAI and appointment of the nominated auditor by the service provider? Please give your comments with justification.

Question 7: What are your views on the proposal for fixing of remuneration of auditor by TRAI and what should be the quantum and

methodology for computation of audit fees, in case the same is to be fixed by TRAI? Please give your comments with justification.

2.13 **Audit of tariff plans:** Presently the audit is done on a sample basis taking into account plans that have more than 10% of total subscribers in each licensed service area, subject to maximum of 10 service plans per licensed service area. In addition to the above, three prepaid tariff plans and two post-paid tariff plans, having the largest number of subscribers, shall also be covered in audit. The number of sample size to be checked in each plan should be such that a confidence level of 95% at a confidence interval of 3% is achieved. The plans launched during the previous years and having registered subscribers below 10% are out of the purview of the annual audit. As per discussions with the auditors, number of problems is found in the new plans launched during the year. As such, there may be a need to include more number of tariff plans which are launched during the year. Hence, it is proposed that three prepaid tariff plans and two post-paid tariff plans launched during each of the half year of audit that has the largest number of subscribers may be considered for audit. This is also in line with the proposal to have the CDR audits covering both the half year of audit.

Question 8: What are your views on the proposals relating to tariff plans to be covered for audit? Please give your comments with justification.

CHAPTER-3
ISSUES FOR CONSULTATION

- Question 1:** What are your views on imposing financial disincentives for delay in submitting audit reports of the metering and billing system and what should be the quantum of such financial disincentives? Please give your comments with justification.
- Question 2:** What are your views on imposing financial disincentives for delay in submission of Action Taken Reports on audit observations of the metering and billing system and for providing false information or incomplete information and what should be the quantum of such financial disincentives? Please give your comments with justification.
- Question 3:** What are your views on the proposal for audit of the CDRs for at least twice a year- three months CDR pertaining to first half year and three months CDR pertaining to second half year? Please give your comments with justification.
- Question 4:** What are your views on the proposal for simultaneous reporting of instances of overcharging to TRAI by the auditor, monthly progress report on the action taken by service providers on such audit observations and financial disincentives on delayed refund of such overcharged amounts? Please give your comments with justification.
- Question 5:** Do you support mandating service providers to undertake a thorough analysis of each audit observations and the requirement to furnish a detailed comment on each audit observation, as proposed above, including financial disincentives for submitting audit reports without adequate comments? Please give your comments with justification..
- Question 6:** Do you support nomination of auditor by TRAI and appointment of the nominated auditor by the service provider? Please give your comments with justification.

Question 7: What are your views on the proposal for fixing of remuneration of auditor by TRAI and what should be the quantum and methodology for computation of audit fees, in case the same is to be fixed by TRAI? Please give your comments with justification.

Question 8: What are your views on the proposals relating to tariff plans to be covered for audit? Please give your comments with justification.

TELECOM REGULATORY AUTHORITY OF INDIA
NOTIFICATION

New Delhi, the 21st March, 2006

[File No. 305-8/ 2004 (QoS)]. In exercise of the powers conferred upon it under section 36 read with paragraphs (i) & (v) of clause (b) and clause (d) of sub section (1) of section 11 of TRAI Act 1997, the Telecom Regulatory Authority of India hereby makes the following regulation, namely:

Short title, extent and commencement

1. i) This regulation shall be called *“Quality of Service (Code of Practice for Metering and Billing Accuracy) Regulation 2006” (5 of 2006) (hereinafter called the ‘Regulation’)* .
- ii) This regulation shall be applicable to all the Basic Service Providers, Unified Access Service Providers and Cellular Mobile Telephone Service Providers, including Mahanagar Telephone Nigam Limited and Bharat Sanchar Nigam Limited.
- iii) This regulation shall come into effect from the date of its publication in the Official Gazette.

Definitions

2. In this Regulation, unless the context otherwise requires:
 - i) **‘Act’** means the Telecom Regulatory Authority of India Act, 1997.
 - ii) **‘Basic Telecommunication Services’** means services derived from a Public Switched Telephone Network (PSTN) and as specified in the licence.
 - iii) **‘Cellular Mobile Telephone Services’** means services derived from a Public Land Mobile Network (PLMN) & as specified in the License. This includes both Cellular Mobile Telephone Service provided through GSM and CDMA Technology.
 - iv) **‘Quality of Service’** is the main indicator of the performance of a telephone network and of the degree to which the network conforms to the stipulated norms.

- v) Words and expressions used in this Regulation and not defined here shall bear the same meaning as assigned to them in the Act.

Purpose of laying down the Code of Practice for Metering and Billing Accuracy:

3. The purpose of laying down the Code of Practice for metering and billing accuracy is to:

- i) Bring uniformity and transparency in the procedures being followed by service providers with regard to metering and billing.
- ii) Prescribe standards relating to accuracy of measurement, reliability of billing.
- iii) Measure the accuracy of billing provided by the Service Providers from time to time and to compare them with the norms so as to assess the level of performance.
- iv) Minimize the incidences of billing complaints.
- v) Protect the interest of consumers of telecommunication services.

4. Code of Practice for metering and billing accuracy:

The service provider is required to comply with the Code of Practice for metering and billing accuracy as laid down in Annexure-1.

5. Review:

The code of practice for metering & billing accuracy as given in regulation 4 above may be reviewed by the Authority from time to time. The Authority, on reference from any affected party, and for good and sufficient reasons, may review and modify this regulation.

6. Auditing of Metering and Billing System:

The Authority shall notify the panel of auditors to certify the Metering and Billing System of service providers. The service providers shall arrange audit of their Metering and Billing System in compliance with this regulation on an annual basis through any one of the auditors as may be notified by the Authority and an audit certificate thereof shall be furnished to the Authority not later than 30th June of every year.

7. Explanatory Memorandum:

This regulation contains at Annexure-2, an explanatory memorandum, which explains the background and reasons for its issuance.

8. Interpretation:

In case of any doubt regarding interpretation of any of the provisions of this Regulation, the decision of the Authority shall be final and binding.

(Sudhir Gupta)
Advisor (QOS)

Code of Practice for metering and billing accuracy

1. Information relating to Tariffs

1.1 Before a customer is enrolled as a subscriber of any telecommunication service, he shall be provided in advance with detailed information relating to the tariff for using that service, in accordance with TRAI's Direction No.301-26/2003-TRAI(Eco) dated 2nd May, 2005 and No.301-49/2005-Eco dated 16.09.2005. Further, the service provider should inform the customer in writing, within a week of activation of service, the complete details of his tariff plan. Such information shall be in the format "C" prescribed in TRAI Direction No.301-26/2003-TRAI (Econ.) dated 2nd May, 2005. In addition, the following information shall also be provided:

- Quantity related charges (e.g. the charge for each SMS message, or kilobyte of data transmitted).
- Accuracy of measurement of time, duration and of quantity, and also the resolution and rounding rules, including the underlying units, used when calculating the charges for an individual event or an aggregation of events
- Contractual terms and conditions for supply, restriction and cessation of Service

1.2 The information required in clause 1.1 shall be available on the Service Provider's web site, as prescribed in TRAI Direction No.301-26//2003-TRAI (Econ.) dated 2nd May, 2005.

1.3 Where a value-added service (e.g. download of content, such as a film clip or ring tone) or entry to an interactive service (such as a game) can be selected through a choice of the service user (e.g. by dialing a specific number) then the charge for the service must be provided to him before he commits to use the service.

2. Provision of Service

The services provided to the customer and all subsequent changes therein shall be those agreed with him in writing prior to providing the service or changing its provisions.

3. Accuracy of Measurement

3.1 All charges must be consistent with the published Tariff applicable to the end-user charged.

3.2 Unless otherwise specified in the published Tariff or previously agreed Tariff, a charge shall be determined in accordance with the following limits:

(a) Where the charge is dependent upon duration, the recorded duration shall be measured to within:

- (i) Between +1 seconds and -1 second; or
- (ii) Between +0.01% (1:10,000) to -0.02% (1:5,000)

whichever is less stringent; and

(b) where the charge is dependent upon the time of day, the time of day shall be recorded to within ± 1 second, traceable to an appropriate time reference; and

(c) where the charges are dependent upon the counting of occurrences of a particular type, the count shall be accurate to no more than plus 1/25,000 (0.004%) or minus 1/1,000 (0.1%).

3.3 Where measurement under clauses 3.2 (a), (b) & (c) reveals systematic errors in timing or counting that result in overcharged events which are not stated in published Tariffs then correction should take place to ensure accurate Bills.

4. Reliability of Billing

4.1 The performance of a Total Metering and Billing System shall be, subject to the tolerances specified in clause 3.2:

(a) the numbers of items of service usage that are overcharged events or undercharged events, as a proportion of the total number of chargeable events, shall not exceed the limits shown in Table 1; and

(b) the sum of the values of the errors in the overcharged events or undercharged events, as a proportion of the total value of the total number of Chargeable events, shall not exceed the limits shown in Table 1.

Table 1 – Total Metering and Billing System reliability performance requirements

Chargeable events	Performance
Number under or not charged	0.1% (1 in 1000)
Number overcharged	0.004% (1 in 25,000)
Value under or not charged	0.05% (1 in 2000)
Value overcharged	0.002% (1 in 50,000)

4.2 Where implementation of an order for a service, feature or discount which depends on the number or duration of chargeable events is applied at variance with published Tariffs, each chargeable event within the scope of the incorrectly applied

order shall be an undercharged event or an overcharged event, as appropriate, for the purposes of clause 4.1.

- 4.3 Where an item of service usage is completed other than intended, but the charge applied is correct for the service as delivered, this shall not be regarded as either an undercharged event or an overcharged event.
- 4.4 The increase in duration or number of items of service usage resulting from degraded transmission performance shall not be taken into account when computing the performance of the system.

5. Applying Credit to Accounts

- 5.1 For post-pay accounts, payments made by a customer shall be credited to his account within 3 working days of receipt of the cash/ cheque. Where credit is given by the service provider, this shall be applied within one working day of its agreement.
- 5.2 For pre-pay accounts, top-up credit shall be applied to a customer's account within 15 minutes of its application. Where credit is given by the service provider, this shall be applied within 1 day of its agreement.

6. Timeliness of Post Pay Billing

- 6.1 The timeliness of bill issue or bill data file issue shall be subject to systematic processes.
- 6.2 Any chargeable events the details of which are not available when the bill is prepared shall be included in a subsequent bill, but not later than the fourth monthly bill after the chargeable events occurred. Any details not so presented shall be written off and if significant be counted against the performance for undercharged events in clause 4.1. Exceptionally, event details from a separate service provider may be billed up to three months after receipt.
- 6.3 Agreement to extend the timescales described in clause 6.2 may be sought from the TRAI. An extension will only be available on an irregular basis. Decisions will be made on application for an extension concerning:
 - (a) the method in which how customers will be informed of a protracted delay in rendering call records onto a subsequent bill; and
 - (b) the integrity of the billing process audit arrangements.

6.4 The service provider shall contract with its delivery agent to ensure that an effectual bill or bill data file delivery schedule is in place. The existence of such a contract shall be subject to audit.

7. Restriction and Removal of Service

Where the service provider unilaterally intends to restrict or cease service to the customer, a notice shall be provided to the customer in advance of such action so that the customer has reasonable time to take preventive action to avoid restriction or cessation of service.

8. Complaint Handling

8.1 The service provider shall have a documented process for identifying, investigating and dealing with billing complaints and creating appropriate records thereof.

8.2 The service provider shall carry out a root cause analysis for each upheld billing complaint, categorise the cause and establish proportionate remedial action to correct it.

8.3 Where the root cause affects multiple customer accounts, then all affected Bills shall, if practicable, be included in a recovery programme.

8.4 Where remedial action has not been completed and the cause is likely to affect other bills when issued, then the service provider shall take reasonable steps to ensure that they are checked and, if necessary, corrected, before being sent to the customer. If not checked and corrected such Bills shall be included in a recovery programme (clause 8.3).

9. Materiality

Compliance with the requirements contained in this regulation shall need to be demonstrated only in relation to products and services that have a material impact on the customer's bill. This materiality is deemed to be:

- (a) where the service provider's turnover from a product or service comprises 5% or more of its total turnover with the customers targeted for that product or service; or
- (b) where the number of customers subscribing to a product or service offered by the service provider comprises 5% or more of the customers targeted for that product or service; or
- (c) at the specific direction of the TRAI.

10. Submission of Compliance.

The service providers shall submit the compliance of above code of practice to TRAI on yearly basis.

EXPLANATORY MEMORANDUM

Background

1. TRAI has been regularly receiving many billing related complaints, particularly from the mobile customers. For building the confidence of the subscribers in the Billing and Call Charging systems of Telecom Operators, an international consultant had been engaged to help carry out an audit of the metering and billing system of different service providers. The objective of the exercise was to help TRAI define the parameters with benchmarks for fair and reliable metering and billing system. The auditing of the billing systems of mobile operators revealed that while the billing systems being used by various operators are comparable to other systems being deployed by major international players, some of the process/ procedure being followed by the mobile operators leads to customer complaints and the attendant customer dissatisfaction.

2. As a follow-up to the audit of the billing system of mobile operators, the Authority had developed a draft Code of Practice for metering and billing accuracy, which has benchmarks for metering and billing system, so as to bring standardization and transparency in the procedures being followed by various operators. The Authority had undertaken public consultation on the draft Code of Practice for metering and billing Accuracy along with other issues emerged out of auditing of billing systems of mobile operators such as charging for undelivered SMS and short duration calls by releasing a Consultation Paper on these issues on 2nd May, 2005. This paper discusses these benchmarks, Code of Practice for metering and billing accuracy, the international practices and regime for regulating the Code of Practice. Open House Discussions with the stakeholders were held at Hyderabad, Kolkata, Mumbai and Delhi in September/ October, 2005. The Authority considered the comments received from stakeholders while finalizing the Regulation.

Code of Practice for metering and billing accuracy:

3. The service providers, though broadly in agreement with the benchmarking and Code of Practice, were not in favour of a separate benchmarking other than those given in the QOS Regulation. The parameter given in the QOS Regulation is complaints-based measure of billing accuracy. While analysis of upheld billing complaints to find root causes is useful in preventing further occurrences of a problem, and is to be encouraged, it is a proactive process. System assessment and performance measurement, if done frequently, has the advantage, of identifying problems

and rectifying them before the subscriber becomes aware of them. This reduces the incidence of complaints, benefiting the operator through the reduction of costs of complaint handling, and reducing the burden of complaints referred to the regulator. As such, the Authority felt that it would be appropriate to implement a Code of Practice for metering and billing accuracy.

4. Information relating to Tariffs

4.1. During the consultation process on Billing Issues TRAI had issued the following directions/ order relating to tariff:

i). Presenting, marketing or offering tariff plan in any misleading manner is not permitted. All monthly fixed recurring charges which are compulsory for the subscriber under any given plan shall be conveyed as a single figure under one head (TRAI's Direction dated 16.09.2005).

ii). The Service Providers must inform the customer in writing, within a week of activation of service, the complete details of his tariff plan. In addition, as and when there are any changes in any aspect/item of tariff in the chosen package, the operator shall intimate, in writing, such changes to those subscribers whose tariff packages undergo a change (TRAI's direction dated 29.06.2005 on information to customers about complete details of the tariff plan)

iii). The Service Providers must publish in all communications/ advertisements relating to premium rate services, e.g. ring tones, wall paper, astrology, quiz etc. the pulse rate/ tariff for the service (TRAI's direction dated 03.05.2005 on Premium Rate Services).

iv). Websites of the service providers shall contain comparison of tariff plans in terms of estimated monthly bill. i.e. financial implications based on certain preset assumptions along with the complete details (TRAI's Direction dated 02.05.2005).

4.2. These directions/order are also incorporated in the Code of Practice. The information regarding rounding rules, accuracy of measurement of time and of quantity, and also the resolution and rounding rules, including the underlying units, used when calculating the charges for an individual event or an aggregation of events could be given to a customer in writing at the time of his enrolment or immediately thereafter, but within a week of activation of service. In the case of a pre-paid customer this information could be given along with the SIM Card.

4.3. Presently the service providers are offering a range of value added services, many of which are premium rate services like tele-voting, tele-quiz, games, contests etc. In order that the customer is aware of the different

rates for these premium rate services it has been provided in the Code of Practice that the customer should be provided information about the charges for the premium rate service every time before he commits to use the service. The service providers should implement necessary changes in their IVR system for enabling automatic provision of information about premium rate services.

4.4. Regarding Provision of Service at item 4.1(ii), the service providers had represented that SMS may be allowed as a medium for obtaining the consent of the customer for any service. The Authority has accepted this suggestion and SMS could be used as a medium for obtaining the consent of the customer for any service. Such consent through SMS should be explicit and there shall be no deemed consent i.e. consent through default, if no message is received by the service provider.

5. The Authority shall identify a panel of Agencies capable for auditing the billing system. These Agencies are expected to be notified by 30th April, 2006. The service providers may appoint any one of these Agencies for auditing their billing system vis-à-vis the Code of Practice for metering and billing accuracy. The certification of the billing system should be done on an annual basis. The Certificate issued by the Agency shall be filed with TRAI not later than 30th June of every financial year. The charges for such certification of the billing system shall be borne by the service providers. The service providers shall take corrective action on the inadequacies, if any, pointed out by the Agency in the Certificate and an Action Taken Report thereon shall be filed by with TRAI not later than 30th September of every financial year.

6. Before finalisation of this regulation, this regulation in its draft form was sent to all the service providers and consumer organizations for their comments.