Chapter 15

Topic : Inspection & Quality of Services

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INSPECTION & QUALITY OF SERVICES

PREFERENCE:

Customer satisfaction is the major determining factor in the emergence of new services, setting standards and designing of network. Therefore, the customer requirements and expectations are paramount consideration in Quality of service standards.

INTRODICTION:

1.1 Section 11 (1) (b) (v) of the Telecom Regulatory Authority of India Act, 1997 mandates the Authority 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 survey of such service provided by the service providers so as to protect interest of the consumers of telecommunication services". In the discharge of these functions and in order to

(i) Create conditions for customer satisfaction by making known the quality of service which the service provider is required to provide and the user has a right to expect;

(ii) Measure the Quality of Service provided by the Service Providers from time to time and to compare them with the norms so as to assess the level of performance; and

(iii) To generally protect the interests of consumers of telecommunication services,

Inspection Circle is conducting the Survey of Quality of service for the selected SSAs (Total 109 cities) which are categorized under I , II and III in respect of Basic services, CMTS Services and Broadband services during April 09 to Sep 09 (Round II) and Oct 09 to March 10 (Round III). One Nodal Officer from Inspection circle and One Nodal Officer from SSA are nominated (by The GM / TDM of the SSA) for the Survey of Quality of Service in every Six month of span.

Basic Service (Wireline) - Quality Of Service Objective Parameters And Their Benchmarks

The present Quality of Service parameters for Basic Service (wire line) included parameters on service provision, service performance, Call Completion Rate, Billing, Customer opinion, Customer service center and Visibility of advertisement.

SERVICE PROVISION

(i) DEL Growth (NET) (% of Target Achieved): The NET DEL growth for the SSA is to be taken into consideration for the performance measurement. The minimum and

maximum norm for this parameter is 90% to 100%. Targets/ achievement of DELs will be taken as Landline + WLL (Fixed + Limited mobility).

(ii) Oldest Waiting List (Date): Date of the oldest waiting list is to be taken for the performance measurement of QoS. Date of oldest waiting list should be with in one month minimum and up to maximum six month.

(iii) Installation in on demand areas (Within Seven days): This norm is in regard to provision of a telephone after registration of demand. If the telephone can be provided on demand, the same should be provided within the benchmark of 7 days. In all other cases, waiting list should be maintained and connections released in a non-discriminatory manner as per the waiting list. BSNL provides access to telephone in remote and rural areas on account of its social obligation being a Public Sector Undertaking (PSU). Moreover, mobile phones are increasingly being used as a substitutable service for fixed line telephones. It is in the interest of service provider (BSNL) to provide the telephone connection at the earliest as the customer has wide choice available now. Areas where difficulties in providing the connection within seven days in certain cases such as cable pair not available in the particular locality falling within the exchange area on demand, technical non-feasibility, problems associated with permission from local bodies for laying cables i.e. Right of Way (ROW) etc, are not taken into consideration / account while the calculating the performance measurement of QoS.

(iv) Shift Intra Exchange (Within Three days): Minimum 90% of the shift intra exchange cases should be provided within three days after the payment. For better Quality of Services all 100% cases must be shifted within three days for intra exchange shift.

(v) Shift Inter Exchange (Within Seven days): Shift cases where the telephone is shift from one exchange to other exchange are considered as Shift Inter Exchange. Minimum 90% cases should be provided within seven days after the registration / payment; however efforts should be made to provide all (100%) cases within the benchmark period of seven days.

(vi) Broadband (% of Target achieved): For every SSA broadband connection target is distributed by the circle office. During the Survey of QoS the percentage of target achieved is calculated as ratio of number of connection provided divided by six monthly targets (as SQoS is done in the interval of Six month). Minimum 90% and Maximum 100% should be achieved by the SSA within the desired period.

(vii) Leased line after payment: The norm for leased line after payment is within 30 days. Up to 90% cases of leased line after payment should be provided within 30 days and 100% for the excellent Quality of service.

(viii) Additional facility < 24hrs: The service provider is supposed to provide the additional facility, wherever the customer has made requests, at the earliest. From the

Quality of Service point of view 90% of such request should be complete within 24 hours.

(ix) POI Provision after payment: Point of Interconnection is provided for the connectivity between BSNL and Private Operators for exchange of calls. POI should be provision within 3 month after the payment / from the date of demand draft issue. At least 90% of the POI should be provisioned within 3 months.

SERVICE PERFORMANCE

REPAIR SERVICES

(x) Pole less Activity: Target for pole less activity during the financial period is provided by the circle office. During the Survey of Quality of service the percentage of pole less activities with A/Ted by Inspection Circle is to be taken into consideration. From 80% to 100% of target should be achieved by the SSA during the period of six month. The target is also divided into half yearly for the measurement of performance of pole less activities.

(xi) IVRS Based Centralized booking: Minimum 95% of the exchanges under the SSA should be covered by the centralized Interactive Voice Response System based booking.

(xii) Fault Rate: Number of faults per hundred subscribers per month is considering as fault rate of the SSA. The norm for fault rate is up to five faults per 100 subscribers is permissible during a month. However as per the guide line from in BSNL H/Q it is maximum up to 7 per 100 subscribers. To maintain Quality of Service satisfaction high, the fault rate should be kept low as possible.

(xiii) The faults which may be excluded from the count are faults due to natural calamities such as fire, flood, cyclone, earthquake or any other force-majeure etc. which are beyond the control of service provider.

(xiv) Repeat Fault: Norms for the Repeat fault is between “0.1% to 0.05%.”

(xv) Time Taken to Repair: Mean Time to Repair is calculated as

(xvi) Mean Time to Repair = sum of duration of each repair time in hours for all the fault incidences in a Quarter (3 months) / Total number of fault incidences in a month.

(xvii) For counting the duration of repair time only working hours shall be counted. The duration shall be from the time of the complaint till the time of repair of the fault, excluding non-working hours and holidays. Generally the non-working hours will be counted from 6.00 PM to 8.00 AM.

(xviii) Time taken to repair must lies between 8 hours and up to 12 hours. For excellent quality of service this parameter plays an important role hence this should be kept minimum as possible.

CALL COMPLETION RATIO (CCR)

Call Completion Rate is defined as the ratio of the number of successful calls to the number of call attempts. Not all call attempts result in successful calls i.e. called party answers. A variety of reasons such as called line busy, no answer and congestion in the network as well as subscriber behavior like premature release, wrong dialing etc. are responsible for the failure. Congestion or blocking occurs due to either common control equipment congestion in the exchange or congestion in the trunk circuit /junction group to handle the calls. CCR is measure during the day busy / night busy hour.

(i) CCR (Terminating at Level II TAX) : Minimum 35% of terminating calls at the level II TAX of SSA should be successful calls under this performance indicator.
(ii) Local CCR: Benchmark for this performance indicator is more than 55% of the local terminating calls should be successful calls for all the local switches in the SSA.

BILLING

(i) Billing Complaints. The percentage of bills resulting in a customer complaint indicates the billing performance.
Billing complaints per 100 bills issued = total number of disputed bills X 100 total number of bills issued during one billing cycle.
The Billing Performance parameters have been specified for charging systems of Billing Software system. It includes charging errors in preparation of bills by the service provider. This also relates to the handling of billing/charging to customers and is reflected in the number of complaints received from customers due to Billing /charging errors, including the timeliness in delivery of bills. All complaints on each bill are taken as one complaint. The types of billing complaints could include double charges, excess charges, wrong billing, payment made and not credited or wrongly credited, bill received late or bill not received, wrong address of the bill or any other billing errors. In addition to the above, any billing complaint which leads to billing error, waiver, refund, credit or any adjustment shall also be included as valid billing complaint for calculating the number of disputed bills.The benchmark for this parameter is not more than 0.1% of bills i.e. not more than one bill in hundred bills issued should be disputed over a billing cycle.
(ii) Billing Complaints pending more than one month. The benchmark for this parameter is up to 0.5% of complaints should be pending more than a month.

(iii) ARPU (Average Revenue per Unit): Percentage of ARPU achieved should be more than 90% of target ARPU assigned to the SSA for the financial period. This parameter reflects the quality of services provided by the BSNL, as if it increases it means customers are happy from the services provided by the BSNL and vice versa.

(iv) Billing collection efficiency within 3 months: The billing collection efficiency is calculated for one month, third month and six month with the help of SLR ledger of the account wing. The norm for the third month collection efficiency is from 95% to 100%. This parameter reflects the billing collection efficiency with timely issue of bills, delivery of bills of the SSA and the outstanding on the customers.

(v) Refund within 2 months of closure: The benchmark for this performance indicator is payment of refund within 2 month after the application service closure received. The norm for this parameter lies between "95% to 100%".

(vi) Automation of Bill Delivery/Receipt (ie-billing): with the use of internet, online payment services / emails, subscriber can received, view and make payment of their bills through the electronic media such as net banking. All SSAs should be provide such facilities to the customers and promote such services to help the customer to save his precious time in for make payment of bills.

CUSTOMER OPINION SURVEY

CUSTOMER SATISFACTION

A customer's perception of Quality is a judgment made by the customer about the overall satisfaction or otherwise of the service. Therefore customer perception is an essential factor in the successful provisioning of a service. Customer perception is the main criterion by which the service providers can assess and measure the true value of the quality they provide.

Subjective Satisfaction Studies aim to measure the Quality of Service as perceived by the customers and relate this to his/her expectation. While the perception of the Quality of Service will have some relationship with the actual quality of service delivered, there will remain some difference between the two. The gap between expectation and perception of service is an indicator of this satisfaction level (a measure of satisfaction).

There is a direct relationship between Customer Satisfaction and the Quality of Service. The Quality of Service depends on the provider of the service who is responsible for improving and maintaining the network performance and customer care. The Network Performance is the ability of a network or network portion to provide the functions related to communications between users. Similarly, performance in customer care

depends on the ability of the service providers to address the consumer complaints and requests in regard to service, including billing.

The different areas leading to customer satisfaction for different parameters for customer perception of service are mention below:

1. STD Service: Here we get the response from customer regarding the STD services availed by him/her.
2. Call Center/Operator Service : The experience with the call center services in respect of
    a. Satisfaction with ease of access of call centre/ customer care or help line
    b. Satisfaction with the response time taken to answer (waiting time) the call by the customer care executive.
    c. Satisfaction with the time taken by call centre/ customer care/ help line to resolve the complaint.
    d. Satisfaction with the problem solving ability of the customer care executive.
    e. Satisfaction with the achievement of a satisfactory solution or resolution of complaint.
3. Fault Repair Service: Customer is asked for the time duration to repair the fault after his complaint, whether he/she is informed after restoration of fault telephonically or not? Whether customer is getting any alternate facility (like WLL or Call Transfer) in case of cable cut or when repair time is long?
4. Billing Delivery : Whether customer has
    f. Satisfaction with the timely receipt of the bill.
    g. Satisfaction with the accuracy and completeness of the bill.
    c. Satisfaction with the clarity in bills/ presentation of the billing
5. Bill Deposit : Whether customer has
6. Satisfaction with the mode of Bill Deposit.
7. Satisfaction with the process of resolution of billing complaints.
8. Overall Service Satisfaction: Satisfaction with overall quality of total service offering.

CUSTOMER SERVICE CENTER

According to the many business guru's and to many more successful companies, the key to success lies not only in having a good product, but also in being able to provide the

customer with the level of service they desire. Customer service centers plays very important role in the promotion of services.
Customer Care and retention is increasingly becoming a key issue for most companies in today's competitive market place where customers demand immediate access to information and efficiency of response. Customer care centers are one of the most powerful tools for improving the quality of customer contact. The following are the key factors in respect of a good customer service center:-

1. Knowledge about various services: The staff / CSC executive should have a good knowledge about various services provided/offered by BSNL.
2. Behavioral attitude of staff at CSC: Behavior plays an important role is solving the need of the customer. Positive attitude towards the customer makes him feels the importance of himself.
3. Redressal through single window concept: Single window concept helps the customer to get all his/her needs in a single step.
4. Availability of various forms/recharge coupons: NTC forms, Telephone shifting forms, FLPP coupons, ITC/Call now cards etc should be available in CSCs.
5. Display of information: Information related to the landline plans, Broadband plans, and new schemes should be properly displayed on the boards in the CSC.

VISIBILITY OF ADVERTISEMENT

The key to impact advertising is to position the advertising so that the greatest number of consumers will be exposed to it,
The following points are covered in this Performance indicator.

1. Display at major entry points: Entry points like Bus stands, Airports, Railway stations should display with hoarding of welcome message or New Schemes/Plans/Service.
2. Display at Public places: Important public places, Commercial places, Markets should have hoarding/ wall paintings/banners etc.
3. Display on BSNL buildings: The BSNL premise should be display (with lighting) with latest plans, services, and schemes etc.
4. Display on pillars: Pillar can be painted with BSNL mono this will not only advertise the company but also protects pillars from corrosion.

ACCESSIBILITY OF OFFICER TO THE PUBLIC: The committee as a customer should verify accessibility of the officers & weightage is given as excellent, very good, good or satisfactory.

Cellular Mobile Telephone Service - Quality Of Service Objective Parameters And Their Benchmarks

The quality of service parameters for Cellular Mobile Telephone Service have been divided into Seven categories in the Survey of Quality of Service namely Network Performance, Network Faults, Development , Network Usage & CAF, Call Center, Customer care and Awareness, Metering and Billing.
Each of the parameters in these categories is detailed below:-

NETWORK PERFORMANCE
Call Set-up Success Rate (within licensees own network)
Call Setup Success Rate is defined in the existing Quality of Service Regulation as the ratio of Established Calls to Call Attempts. Established Calls means the following events have happened in call setup:

i) Attempt is made
ii) The TCH is allocated and
iii) The call is routed to the outwards path of the concerned MSC.

Thus this includes complete signaling in the call setup process and does not aim to measure the performance of the called exchange or that of the Point of Interconnection (PoI).

CSSR calculation should be measured using OMC generated data Only and Measurement should be only in Time Consistent Busy Hour.

CSSR is an important parameter to assess the health of the radio network. The Benchmark for this parameter is set as it should be more than 95%.

Blocked Call Rate (SDCCH congestion and TCH congestion)
Blocked call rate is a very important network related parameter for the consumers. It denotes congestion in the network leading to non-establishment of the call. The congestion can be in the signalling channel known as Standalone Dedicated Control Channel (SDCCH) or in the traffic channel (TCH). SDCCH channel/paging channel is the control channel where majority of the call set up occurs. TCH is a logical channel which carries either encoded speech or user data.
Blocked call means a call that is not connected because there is no free channel to serve a call attempt. Numbers of blocked calls are those times where there is no free channel to serve a call attempt. Hence this parameter represents congestion in the network. The

congestion may be at SDCCH level or TCH level. For the SDCCH Congestion the benchmark is <1%. For the TCH Congestion the benchmark is <2%.
Regarding measurement of this parameter, this parameter should be measured using Operation Maintenance Centre (OMC) generated data only in Time Consistent Busy Hour (TCBH).

Percentage of cells having more than 3% of TCH drop

Worst affected cells are defined as cells in which the call drop rate exceeds 3% during cell Bouncing Busy Hour (BBH) or at any other hour of a day. The formula for calculating the Percentage of worst affected cells having more than 3% TCH drops (call drop rate) is –
Percentage of worst affected cells have more than 3% TCH drops (call drop rate
= (No. of worst affected cells having call drop rate >3% in a month X 100) / Total No. of cells in the licensed service area

The benchmark for this parameter is Percentage of cells having more than 3% TCH drops (call drop rate) ≤ 5%.

Call drop rate:

The call drop represents the service provider's ability to maintain a call once it has been correctly established. The objective of this parameter is to provide the consumer with an expectation of how successful a mobile network will be at retaining the signal throughout the whole duration of the call. This parameter shall include both incoming calls and outgoing calls which, once they have been established and have an assigned traffic channel (TCH), are dropped or interrupted prior to their normal completion by the user, the cause of the early termination being within the service provider's network. This parameter measures failure in coverage, problems with the quality of the signal, network congestion and network failure.

Call drops in network can be caused by any or a combination of the following reasons:
♦ Equipment: GSM radios/Combiners can be a cause of this, solution to this is replacement of the unit. A Mobile Station (phone) can also be a cause.
♦ VSWR (voltage wave standing ratio): VSWR caused by poor connections on feeders, water penetration, fault on antenna etc.
♦ Transmission problem: If transmission is not perfect, high B.E.R (Bit Error Rate) or other factors causing inaccuracy of transmission.

♦ Interference: when there's frequency interfere (either co-channel or adjacent interference).
♦ Hand-over: if hand-over between two sectors is not well defined
♦ Antenna down-tilts wrong (coverage shortfalls or interference)
♦ Antenna on one sector pointing in different directions (Bad site performance and dropped calls)
♦ Antenna support structure not rigid (dropped calls)
♦ Antenna obstructed (poor performance and dropped calls)
As per the Quality of Service Regulation the benchmark for Call Drop is <2%.

Congestion on POIs During TCBH
This parameter signifies the ease by which a customer of one network would be able to communicate to the customer of another network. This parameter also reflects as to how effective is the interconnection between two network. The benchmark for this parameter is <0.5% for outgoing traffic on individual POI. This is an issue of concern to TRAI as there has been congestion at many Point of Interconnections (POIs) due to non-provisioning and insufficient provisioning of telecom circuit resource as per traffic requirements, which leads to:
a. inter-network congestion at the POI;
b. loss of calls;
c. repeated call attempts by consumers;
d. deterioration in Quality of Service; and
e. consumer dissatisfaction.

Percentage of cells with >10% Handover Failure: The benchmark for % of cells with >10% handover failure should be ≤ 10%.

NETWORK FAULTS

1. Availability of BTS:
"BTSs accumulated downtime (not available for service)" shall basically measure the downtime of the BTSs, including its transmission links/circuits during the period of a measurement, but excludes all planned service downtime for any maintenance or software upgradation. For measuring the performance against the benchmark for this parameter the down time of each BTS lasting for more than 1 hour at a time in a day during the period of a measurement shall be taken for computation. The total duration in hours of all such instances of downtime of BTSs shall be calculated. Thereafter, the

performance against the benchmark (Availability of BTS should be more than 98%) shall be measured through the following formula:

BTSs accumulated downtime (not available for service) =
Sum of downtime of BTSs in period of measurement in hours i.e. total outage time of all BTSs in hours during measurement period X 100 / 24 X No. of days in the period X No. of BTSs in the city

2. Percentage of worst affected BTS due to downtime

"Percentage of worst affected BTSs due to downtime" the down time of each BTS lasting for more than 1 hour at a time in a day during the period of a quarter shall be recorded and wherever the accumulated downtime of a BTS during the period of a month exceeds 24 hours the said BTS shall be taken as worst affected BTS for computation. The total number of such worst affected BTSs in a month shall be determined. Thereafter, the performance against the benchmark shall be measured through the following formula:
Percentage of worst affected BTSs due to downtime =
No. of BTSs having accumulated downtime of > 24 hours in a month X 100
/ Total No. of BTSs in the city
The benchmark for this indicator is less than 1%.

3. BTS interruption rate: Interrupted BTS is the BTS down for more than 1 Hrs in a day. The performance measurement for BTS interruption rate is calculated as
= Total No. of faults occasions in a month / total number of BTS in the city X no of days.
The benchmark for this indicator is up to 20%.

DEVELOPMENT

1. Achievement of Net subscriber's addition target: more than 70% of net subscriber's addition target should be achieved by the city/SSA during the period of Survey of QoS.
2. Provisioning of direct POIs to other operators in < 3 months from payment date. The benchmark for this performance indicator is > 70% of POI should be provided within the specified period.

NETWORK USAGE AND CAF

1. Revenue per OG minute (weighted average of postpaid and period): The revenue per OG minute is calculated by the Account Officer CMTS at the circle level of the Circle. The benchmark for this is it should be more than 50 paise.
2. Percentage of CAF (Customer Application Forms) verified OK as per DOT guidelines: Prepaid connections should be properly verified as per the guideline of DOT in respect of Photo, Identity and Address proof and entry should be made in the billing system in order to safety/ misuse of the connection. This is desired that it should more than 95%.

CALL CENTER

Call centers are one of the most powerful tools for improving the quality of customer contact.

1. Percentage of calls answered by the Operators (voice to voice) within 60 seconds.
2. This parameter reflects the speed in which a call is answered by the operator at the Call Centre/Customer Care/Help Desk service provided by the service provider. The time taken for connecting to the operator shall be calculated from the time the customer has keyed the relevant number in the IVR option menu, for speaking to the customer care executive/operator.
3. Accessibility of Call Center

Accessibility of Call Centre number i.e. % age of calls answered (electronically) which basically mean that the calls should get connected. The benchmark for this is minimum 95% calls to be connected successfully and not more than 5% calls shall encounter congestion or busy signal or no reply or any other failure.

3. Complaints in the call centers over the month / 100 subscriber's base. The benchmark for this parameter is less than 1% complaints over the month.

4. Percentage of complaints resolved within 24 Hours: Minimum 60% of the complaints should be solved within 24 hours of booking.

CUSTOMER CARE AND AWARENESS

The following points are check for the Survey of Quality of Services in respect of customer acre and awareness.

- CSC staff-customer friendly attitude knowledge of Mobile service & Tariff plans.
- Availability of various forms & pamphlets.

- Issue of welcome kit along with sim.
- Visibility of BSNL brand in the city.
- Display of Mobile features / Facilities / tariff etc in CSC and other suitable locations.According to the feedback and visualization marking is done in the manner of Excellent, Very Good, Good and Satisfactory.

METERING AND BILLING

Presently, there are four parameters relating to billing. These are:-

1. Billing complaints per 100 bills issued (benchmark <0.1%): The percentage of bills resulting in a customer complaint indicates the billing performance. It includes charging errors in preparation of bills by the service providers. This also relates to the handling of billing/charging to customers and is reflected in the number of complaints received from customers due to billing/charging errors, including the timeliness in delivery of bills. All complaints on each bill are taken as one complaint. The types of billing complaints could include double charges, excess charges, wrong billing, payment made and not credited or wrongly credited, bill received late or bill not received, wrong address of the bill or any other billing errors.

2. Percentage of billing complaints resolved within 4 weeks: This parameter was provided to facilitate resolution of billing complaints in a timely manner. It is proposed to continue with the present time limit of 4 weeks for resolution of billing complaints. Monitoring of this parameter will help the service provider in collection of dues and also avoidable bad debts. This will also help to increase the customer satisfaction. The benchmark for resolution of 100% billing complaints/ charging complaints should be within 4 weeks.

3. Period of refunds / payments due to customers from the date of resolution of complaints. The parameter period of all refunds/payments due to customers from the date of resolution of complaints relates to payment to a customer by way of credit or otherwise in case a billing complaint is upheld. Thus, a billing complaint has to be resolved within four weeks. Further, in the case of post-paid customer this shall be reflected in the next bill to be issued.

4. Timely issue of Bills and realization of the extent of 95% during the Billing cycle. Benchmark for this performance indicator is by schedule date.

Broadband Service - Quality Of Service Objective Parameters And Their Benchmarks

SERVICE PROVISIONING

(i) Percentage (%) of connections provided within 15 days of registration of demands: 100% of the connections (in feasible areas) should be provided with in 15 days after the registration.
(ii) Broadband connections provided: 100% of the Target should be achieved by the SSA for the six monthly SQoS period.
(iii) Broadband disconnections in last six months (% of working connection): Less than 1 percentage connections may be disconnected in the measurement period (during last six months).
(iv) Oldest registration pending (Date): The date of oldest registration should be within three monthly.
(v) Whether mechanism for online booking (e-booking) exists and working: This facility of online booking through internet of broadband connection may be available to the customer.

FAULT REPAIR

(i) Total no. of faults registered (i.e. complaints): The benchmark for this performance indicator it should be lie within 2% in a month.
(ii) Percentage (%) of faults repaired by next working day: Fault Repair/ Restoration Time mean the time taken to restore an existing customer's service to operational level from the time that a problem or fault is reported. Only those complaints, which have been registered till the close of the business hours of the day, will be taken into account. Complaints registered after the business hours will be taken as being registered in the next day business hours. It is desirable that 100% of the complaints should be repaired within the same working day or in 24 hours of the booking complaint.

However the benchmark for this parameter is more than 90% of the complaints / faults are to be repaired by next working day.
Percentage (%) of faults repaired within 3 working days: More than 99% of the faults should be repaired within 3 working days.

BILLING PERFORMANCE

1. Total no. of bills issued in Time: Benchmark for this indicator is 100% of the bills should be issued in Time.

2. No. of bills disputed (No. of complaints received): Less than 2% of bills may receive complaints.
3. Bill Complaints received as a fraction of total bills issued during last billing cycle (Percentage (%) of bills disputed): Less than 2% of total bills may receive complaints.
4. Percentage (%) of billing complaints resolved within 4 weeks: more than 99% of the complaints must be resolve within 4 weeks.
5. Percentage (%) of cases to whom refund (of deposits) made within 60 days of closures: > 99% refund cases should be refund within 60 days of closures.
6. Automation of Bill delivery/ Receipt (e-billing): Same as in case of basic service.

CUSTOMER CARE

(i) Whether Staff posted for CSC in Broadband is Trained, Dedicated and Adequate: Already discuss in Basic and CMTS services.
(ii) Whether E-mail queries received by nodal in charge (of SSA) is being replied: Yes / No.
(iii) Percentage (%) of calls answered by operators (voice to voice) within 60 secs: Same as in CMTS services.
(iv) Percentage (%) of calls answered by operators (voice to voice) within 90 secs: Same as in CMTS services.
(v) Display/Circulation of Contact nos. (Mobile, Basic) of Broadband Service Staff (SSA/Station) among customers: Yes / No.
(vi) Whether Help Desks are functioning and properly manned: Yes / No.

BANDWIDTH UTILISATION / THROUGHPUT

(i) Download Bandwidth at 2 Km: Subscribers have different bandwidth plans like 256 Kbps, 2 Mbps or 8 Mbps. Check the speed with the help of Broadband speed meter software at 2 Km it should be more than 2 Mbps.
(ii) Broadband connections speed available (download) from ISP node to user (with respect to plan taken): Benchmark for this performance indicator is more than 80%.

SERVICE AVAILABILITY? UPTIME (FOR ALL USERS) IN PERCENTAGE

(i) Total Operational Time Hours: More than 22 Hrs per day.
(ii) Service Availability / Uptime (for all users) in Percentage (%): The Users must get broadband services more than 98% in a month.

TIPS TO REMEMBER

1. As per Section 11 (1) (b) (v) of the Telecom Regulatory Authority of India Act, 1997 laid down the standards of quality of service to be provided by the service providers ..

2. Inspection Circle is conducting the Survey of Quality of service for the selected SSAs.

3. One Nodal Officer from Inspection circle and One Nodal Officer from SSA are nominated (by The GM / TDM of the SSA) for the Survey of Quality of Service in every Six month of span.

Bench Mark for Basic Service (Wireline)

1) Oldest Waiting List (Date): Should be with in one month minimum and up to maximum six month.

2) Shift Intra Exchange (Within Three days): Minimum 90% and up to 100% of the cases should be provided within three days after the payment.

3) Shift Inter Exchange (Within Seven days): Minimum 90% and upto 100% of the cases should be provided.

4) Leased line after payment: Up to 90% cases of leased line after payment should be provided within 30 days and 100% for the excellent Quality of service.

5) POI Provision after payment: At least 90% of the POI should be provisioned within 3 months.

6) Fault Rate: up to five faults per 100 subscribers is permissible during a month. However it is maximum up to 7 per 100 subscribers.

7) The non-working hours will be counted from 6.00 PM to 8.00 AM.

8) Time taken to repair must lies between 8 hours and up to 12 hours.

9) Call Completion Rate : (Terminating)Minimum 35%. Local CCR:More than 55%.

10) Billing Complaints.The benchmark for this parameter is not more than 0.1% of bills.

11) Refund within 2 months of closure: “95% to 100%”.

Bench mark for Cellular Mobile Telephone Service .

1) Call Set-up Success Rate CSSR (within licensees own network) :during Time Consistent Busy Hour should be more than 95%.

2) .Blocked Call Rate :For the SDCCH (Standalone Dedicated Control Channel)Congestion the benchmark is <1%.
For the TCH Congestion the benchmark is <2%.

3) Call drop rate:With reference to traffic channel (TCH) the benchmark is <2%.

4) Percentage of cells with >10% Handover Failure: The benchmark should be ≤ 10%.

5) Availability of BTS: should be more than 98%

6) BTS interruption rate:The benchmark for this indicator is up to 20%.

7) Revenue per OG minute The benchmark for this is it should be more than 50 paise.
8) Accessibility of Call Center:Minimum 95% calls to be connected successfully.

9) Period of refunds / payments due to customers :From the date of resolution of complaints.

Benchmark for Broadband Service

1) Percentage (%) of connections provided within 15 days of registration of demands:100% .
2) Oldest registration pending (Date): Within three monthly.
3) Total no. of faults registered It should be lie within 2% in a month.
4) Percentage (%) of faults repaired within 3 working days: More than 99% .
5) Download Bandwidth at 2 Km: It should be more than 2 Mbps.
6) Broadband connections speed available (download) from ISP node to user (with respect to plan taken): Benchmark for this performance indicator is more than 80%.
7) Total Operational Time Hours: More than 22 Hrs per day.
8) Service Availability / Uptime (for all users) in Percentage (%): The Users must get broadband services more than 98% in a month.

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