



भारतीय दूरसंचार विनियामक प्राधिकरण  
TELECOM REGULATORY AUTHORITY OF INDIA  
भारत सरकार /Government of India



Ref. No.IT-6/1/4(1)/2021-IT

## **Request for Proposal (RFP)**

**for**

### **Development & Maintenance of Mobile App (for managing Unsolicited Commercial Communication) and Reporting Dashboard/Portal**

#### **Telecom Regulatory Authority of India (TRAI)**

Mahanagar Doorsanchar Bhawan (next to Zakir Hussain College)  
Jawaharlal Nehru Marg (Old Minto Road)  
New Delhi: 110 002

**Disclaimer:**

1. The information contained in this Request for Proposal (RFP) document or information provided subsequently to Empaneled Bidder (EB) whether verbally or in documentary form by or on behalf of TRAI, is provided to the EB on the terms and conditions set out in this RFP document and all other terms and conditions subject to which such information is provided.
  
2. TRAI does not make any representation or warranty as to the accuracy, reliability or completeness of the information in this RFP document and it is not possible for TRAI to consider needs of each party who reads or uses this document. RFP includes statements which reflect various assumptions and assessments arrived at by TRAI in relation to the statement of work. Such assumptions, assessments and statements do not purport to contain all the information that each bidder may require. Each prospective bidder should conduct its own investigations and analyses and check the accuracy, reliability and completeness of the information provided in this RFP document and obtain independent advice from appropriate sources.
  
3. TRAI will not have any liability to any prospective bidder/ firm/ or any other person under any laws (including without limitation the law of contract, tort), the principles of equity, restitution or unjust enrichment or otherwise for any loss, expense or damage which may arise from or be incurred or suffered in connection with anything contained in this RFP .document, any matter deemed to form part of this RFP document, the award of the AssignmenPage **2** of **54**t, the information and any other information supplied by or on behalf of TRAI or their employees, any Consulting Agency or otherwise arising in any way from the selection process for the Assignment. TRAI will also not be liable in any manner whether resulting from negligence or otherwise however caused arising from reliance of any bidder upon any statements in this RFP.

4. TRAI will not be responsible for any delay in receiving the proposals. The issue of this RFP does not imply that TRAI is bound to select a Firm/ Agency or to appoint the selected firm/ agency, as the case may be, for the services and TRAI reserves the right to accept/reject any or all of proposals submitted in response to RFP document at any stage without assigning any reasons whatsoever. TRAI also reserves the right to withhold or withdraw the process at any stage with intimation to all who submitted RFP Application.
  
5. This RFP document is not an agreement and is not an offer or invitation by TRAI to any parties other than the applicants who are qualified to submit the Bids. The purpose of this RFP document is to provide EB with information to assist the formulation of their proposals. TRAI may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information in this RFP document.

To

M/s Team Computers Pvt Ltd  
M/s Phimetrics Technologies Pvt Ltd  
M/s Spice Digital Ltd  
M/s NetCreative Mind Solutions Pvt Ltd  
M/s Akal Information Systems Ltd  
M/s Red Mango Analytics Pvt Ltd  
**(TRAI Empaneled Bidders only)**

**Sub: - RFP for Development & Maintenance of Mobile App (for managing Unsolicited Commercial Communication) and Reporting Dashboard/Portal**

Telecom Regulatory Authority of India (hereinafter referred to as TRAI) is inviting bids from TRAI's Empaneled Bidders (hereinafter referred to as EB's) for **'Development and Maintenance of Mobile App (for managing Unsolicited Commercial Communication) and Reporting Dashboard/Portal'** as per details of this RFP.

2. The EBs shall submit their financial offer strictly in accordance with the enclosed format (Annexure 'D').
3. The EB shall accept all technical/commercial terms & conditions mentioned in the RFP.
4. TRAI reserves the right to reject any or all the offers without assigning any reason thereof.
5. **Signing of Bid:** The Bid shall be signed by a person or persons duly authorized to sign on behalf of the EB. The bid shall contain no interlineations, erasures, or overwriting, except to correct errors made by the EB, in which case such corrections shall be initialed by the person or persons signing the bid.
6. **Bid Submission :** In response to this RFP, EB will submit technical and financial bid in two (02) separate envelopes, viz. Envelope A and Envelope B. Envelope A should be marked as 'Technical Bid' and Envelope B should be marked as 'Financial Bid' and each envelope should indicate the name and address of the EB. Each of the two envelopes shall then be sealed and put into an outer envelope marked as 'RFP for the Development & Maintenance of Mobile App (for managing Unsolicited Commercial Communication) and Reporting dashboard/ portal'.

The sealed bid shall be addressed to the Technical Officer(IT) and should reach the Reception Office of TRAI, either by Post/Courier/By Hand at the following address on or before **2:30 pm on 02.11.2021**.

Technical Officer (IT)  
Telecom Regulatory Authority of India  
Mahanagar Doorsanchar Bhawan  
Old Minto Road, J.L. Nehru Marg,  
(Next to Zakir Husain College)  
New Delhi - 110002.

7. TRAI shall not be responsible for any delay and will not entertain the bids received after due date and time. The bids received after the expiry of the prescribed period are liable to be ignored.

8. The Bids will, as far as possible, be opened at **16:30 hrs. on the last day of bid submission** (i.e. 02.11.2021) at TRAI Office at Mahanagar Doorsanchar Bhawan, Old Minto Road, J.L. Nehru Marg, Next to Zakir Husain College, New Delhi – 110002.

9. The Bids shall be evaluated by a duly constituted Committee. Combined Quality Cum Cost Based System (CQCCBS) will be referred to for selecting the EB.

10. It is the responsibility of EB to read all terms & conditions of this RFP carefully before submitting the bid. Incomplete bids not in accordance with the terms and conditions of the RFP document shall be rejected.

11. Any vagueness/incomplete details in the offer shall make it liable to be rejected as such shortcomings in the offer shall be interpreted as incompetence and disinterest or deliberate omission on the part of the bidder to meet tender requirements.

Yours faithfully,



**(Benny Francis K)**  
Technical Officer (IT)

### **Section 1 – Bid Schedule and Address**

<b>S. No.</b>	<b>Description</b>	<b>Bid schedule &amp; Address/details</b>
1	Name of Project	Mobile App (for managing Unsolicited Commercial Communication) and Reporting Dashboard/Portal
2	Reference Number & Date	IT-6/1/4(1)/2021-IT dt.04.11.2021
3	Last date for receiving EB's Pre-bid clarifications in writing	18.10.2021
4	Pre-bid meeting (to be held online)	25.10.2021(15:00 hrs)
5	Last date and time for Bid Submission	02.11.2021 (14:30 hrs)
6	Date and Time of Technical Bid Opening (Envelope A)	02.11.2021 (16:30 hrs)
7	Date and time of Financial Bid Opening (Envelope B)	Technically qualified EBs will be notified
8	Name and Address for communication	Technical Officer (IT) Telecom Regulatory Authority of India Mahanagar Doorsanchar Bhawan J.L. Nehru Marg, (Old Minto Road), New Delhi – 110002
9	Bid Related Queries	Email id: <a href="mailto:it-eoirfp@traf.gov.in">it-eoirfp@traf.gov.in</a>

## **Section 2 - Introduction**

The Telecom Regulatory Authority of India (TRAI) has taken various initiatives to bring transparency and empower the consumers. Towards this end, TRAI has developed mobile app, known as TRAI DND 2.0 app and Portal.

1. The DND app helps consumers to register their number under DND and report spam SMS/calls to their respective Telecom Service Provider (TSP). The app also helps consumers to check the status of their complaints filed.
2. The TRAI DND 2.0 App is available on both Google Play Store and iOS store. The App has also been integrated with the UMANG App of the Govt of India.
3. TRAI now intends to develop a Mobile App (for managing Unsolicited Commercial Communication) and Reporting dashboard/portal with user friendly features.

## **Section 3 - Scope of Work**

This document is a Request for Proposal (RFP) for a system study, design, development, testing & implementation of Mobile App (for managing Unsolicited Commercial Communication) for both iOS & Android platform, Reporting dashboard/portal and further maintenance for a period of two years.

1. All development(s) & enhancement(s) shall be done at par with the best of industry standards in minimum span of time & maintenance of the same shall be done to the satisfaction of TRAI.
2. All the Apps shall incorporate accessibility features & Portals shall be made compliant with Govt. of India guidelines for accessibility by persons with disabilities and the same shall also adhere to Web Content Accessibility Guidelines (WCAG) 2.0 laid down by the World Wide Web Consortium (W3C).
3. All Apps & Portals shall be made bilingual, i.e. in both Hindi & English.
4. Scope of work is detailed in Annexure A to this document.

## Section 4 - General Terms and Conditions

1. Deliverables:
  - (a) Project Management Documents
    - (i) Project Management Plan
    - (ii) Activity list
    - (iii) Risk register
    - (iv) Issue log
    - (v) Requirement documents
  - (b) System requirement specification (SRS) document comprising of following: -
    - (i) Requirement Analysis Document
    - (ii) Solution Architecture
    - (iii) Database design
    - (iv) High Level and Low-Level Design
    - (v) Data Backup/ Archival Process
    - (vi) Requirement Traceability Matrix
  - (c) Development
    - (i) Source Code (Apps and portal)
    - (ii) Source code walk through document
  - (d) Test Report
    - (i) TSP wise API test report (In case of DnD)
    - (ii) Unit test report
    - (iii) Integration and System Test report
    - (iv) User Acceptance Test reports
  - (e) Handover
    - (i) Hosting
    - (ii) Details on the usability of the existing IT infrastructure
    - (iii) User Manual / SOP
    - (iv) Technical Manual, Help Manual
    - (v) Signing key of mobile app development on all platforms

2. **Hosting:** The applications shall be hosted on NIC Cloud. EB shall deploy and maintain the app and portal on the Virtual Machines (VM's) provided by TRAI. The deployed applications on VM's should be monitored by EB for any addition/reduction of resources. All the required resources shall be provided by TRAI. EB shall also optimize the resource utilization.

3. **Training:** The EB shall provide exhaustive training to TRAI officials, TSPs, Appellate Authority and other stakeholders as identified by TRAI for the delivered solution. The e-learning material in the form of small videos, PowerPoint presentation, and training material, in PDF form, shall be made available.

4. EB shall support all the development activities carried out by TSPs and shall respond to their queries in a time bound manner.

5. EB shall appoint a full-time project manager as the Primary Point of Contact, and another employee as the Secondary Point of Contact for communications/ discussions with TRAI.
6. EB shall attend all the meetings regarding project progress review/ presentations called by TRAI even on a short notice period.
7. EB shall use open-source technologies for development of the App/portal/ solution/software.
8. EB shall ensure that project team members are not changed/replaced without consent of TRAI.
9. EB shall develop the solution in a way so that new modules can be developed independently and integrated in a plugin/plug n play manner.
10. The EB shall also be required to undertake the following tasks:
  - (a) Requirement gathering of the Portal and App with user division of TRAI.
  - (b) Coordination and collection of required content from TRAI.
  - (c) Integration and consolidation of data and information.
  - (d) End to end integration and testing of TSP's APIs
  - (e) Coordination and communication with TSPs
  - (f) Provide support to TSPs in bug fixing as and when required
11. **Security Audit of the System:**
  - (a) EB shall get the security audit of the entire software applications done through one of the CERT-IN empaneled agencies to ensure the system is secure from external threats and hacking possibilities.
  - (b) Primary objective of the security audit exercise is to identify any vulnerabilities in the web application from external threats. Once the threats are identified and reported by the auditors, necessary actions to rectify the same shall be taken and security loopholes shall be plugged in by the EB through script modifications, OS hardening etc.
  - (c) The security audit shall be included in project planning activities.
  - (d) The cost of security audit shall be borne by the EB (exact amount to be specified and included as part of project cost). The EB shall be responsible for removing all the bugs reported during the security audit to ensure that all vulnerabilities are fixed, and for getting the security audit cleared.
12. Non-Functional Requirements-

(a) Performance- The App/Portal will be accessed by the public, hence proposed application's architecture, hardware and network requirements should support the application to be reasonably fast and should not cause delay in response on the basis of actual load & when multiple/ concurrent users (like 500 sessions) are connected to the portal.

(b) Quality Attributes- Following are the important software qualities that will be met by the App/Portal:-

- (i) The App/Portal needs to be responsive & can be viewed on multi channels/ devices i.e. Phone/Tablet/Displays & support voluminous user base.
- (ii) It should be able to handle multiple requests.
- (iii) For ease of use, every GUI/feature should consist of a help menu or tooltip with it.
- (iv) Names/Tables/Columns of analysis reports should be self-explanatory.

(c) Technology license & Deployment- The App/Portal needs to be deployed on the cloud. It should be designed & developed in a way to let the IPR rights remain vested with TRAI. Portal needs to be developed using open-source technologies to avoid any product or periodic license fees etc. TRAI shall be the sole owner of all IPR for the software.

(d) Operation & Maintenance - The EB shall provide the support & maintenance on fixing the bugs, minor changes, data collection, data cleaning, data validation, data conversion, integration of the data for the application & monitoring the portal services & mobile app, for two (2) years from the date of completion of warranty period.

(e) Security - Login level security for admin module & secure communications would be needed between client & server and data made available and sought from TSPs, through API/interface. Captcha to be implemented wherever required for human verification. Industry standard best practices shall be implemented across the solutions.

13. The EB shall take a sign off from the user after completion of each milestone and submit a report to TRAI Project Coordinator accordingly. The final sign off for the project shall be taken after completion i.e. Go-live and complete acceptance of the project.

14. There shall be no partial sign-off or acceptance of the project. For all the milestones, work has to be completed with respect to all the modules.

15. TRAI will review the progress of the work done by the EB as and when required.

16. Warranty and maintenance Support - EB shall provide one (01) year of warranty and maintenance support free of cost for the delivered solution from the date of project completion date i.e. Go-live and complete acceptance of the project.

17. Though the initial maintenance and support period is of two (02) years, however, depending on the performance of EB and requirement of TRAI, TRAI may consider extending the maintenance period. The financials for the extended period shall not be in excess of 10% of maintenance cost as submitted in this bid.

18. All the Terms and Conditions mentioned in Expression of Interest (EOI dated 9th January, 2018, along with its two corrigenda dated 19th January, 2018 and 9th February, 2018) and Master service agreement (MSA) are part of this RFP.

19. TRAI may seek clarifications, w.r.t. the proposal, from the EB(s) at any stage. The reply thus submitted by EB(s) shall be reviewed by TRAI.

20. TRAI shall not bear any additional cost other than the financial bid as quoted by EB or otherwise specified by TRAI in this RFP document.

21. EB shall strictly adhere to the timelines in relation to the proposed project plan. All endeavors should be made to complete the project within specified timelines. In case of delay in the deliverable for the reason attributable solely to EB, a penalty of 2.5% of total project cost per week shall be levied. Maximum penalty shall be 20% of the total project cost.

22. If TRAI is not satisfied with the quality of deliverables, it shall seek a formal explanation for the same. In case the reply submitted by the EB is found to be unsatisfactory, TRAI may terminate the services of the EB and shall not be bound to release any further payments/claims.

23. Termination Clause: TRAI reserves the right to terminate the contract by giving one month's advance notice to the EB without assigning any reason. Further, if during the validity period of the contract, the services of the EB are not found to be satisfactory, TRAI may, at any time, terminate the agreement by giving a notice of one month and also make deductions for such unsatisfactory service, as per the agreement, including the cost incurred by it for getting the work done from any other party, from the bills of the EB or from the performance bank guarantee, without prejudice to other remedies available to TRAI under the law.

24. Change Management: Any additional requirements shall be handled through Change Management. If any additional requirements are identified, then

they shall be approved by TRAI so as to be included in current scope of the project. However, TRAI shall bear the additional cost for such requirements. The EB shall submit the man-month effort required to incorporate the additional requirement (as per Annexure D). The rate of man month effort shall not be higher than NICSII Tier III rate. TRAI shall evaluate and approve the man-month efforts. No fresh tendering shall be required to be done if the cost of additional requirements is within 30% of the initial project cost (as per current scope).

25. Release Management: Release of Apps shall be managed by the EB with the approval of TRAI. However, if TRAI wishes to manage the release process, then EB shall provide necessary support.

### **Section 5 - AMC Conditions**

From the date of project completion i.e. Go-live of App & Portal and complete acceptance of the project, the app and portal shall be under warranty for a period of one (1) year. Upon completion of warranty period, the Apps and Portal shall be maintained for smooth operationalization for a period of two (02) years. The terms and conditions for maintenance & support services to be carried out are detailed at Annexure B.

### **Section 6 - Bid Submission**

1. In response to this RFP, EB will submit technical and financial bid in two (2) separate envelopes, viz. Envelope A and Envelope B, as per formats enclosed in Annexure C and Annexure D respectively.

2. Envelope for bid submission:

- (a) The Bid shall be prepared in two (02) different Envelopes: - Envelope A & Envelope B.
- (b) Each of the two envelopes shall then be sealed and put into an outer envelope marked as 'RFP for the Development & Maintenance of Mobile App (for managing Unsolicited Commercial Communication) and Reporting dashboard/ portal'.
- (c) The outer envelopes shall:-
  - (i) be addressed to TRAI at the address mentioned in Section 1.
  - (ii) contain the name and address of the EB submitting the bid.
- (d) The inner envelopes shall also indicate the name and address of the EB.
- (e) Envelope A should be marked as 'Technical Bid' and contain the technical bid as per the technical formats defined in Annexure-C.
- (f) Envelope B should be marked as 'Financial Bid' and contain the financial bid as per the format specified in Annexure-D.

3. Period of Validity of Bids: Bids shall remain valid for a period of 60 days after the date of bid opening as mentioned in Section 1 or as may be extended

from time to time. TRAI holds the right to reject a bid valid for a period shorter than 60 days as non-responsive, without any correspondence.

4. Extension of Period of Validity: In exceptional circumstances, prior to expiry of the bid validity period, TRAI may request the EBs consent to an extension of the validity period. The request and response shall be made in writing. Extension of validity period by the EB should be unconditional and irrevocable.

5. Signing of Bid: The Bid shall be signed by a person or persons duly authorized to sign on behalf of the EB (EB shall submit authorization letter for the same). All pages of the bid shall be initialed by the person or persons signing the bid. The bid shall contain no interlineations, erasures, or overwriting, except to correct errors made by the EB, in which case such corrections shall be initialed by the person or persons signing the bid.

6. The bids should strictly adhere to the defined formats. Information otherwise provided shall not be evaluated.

7. For financial bids, EBs shall have to estimate the man month effort with reference to the precise scope of work defined in the RFP, the corresponding total resource cost arrived at by reckoning the man-month rate, which shall not be higher than NICSII Tier III.

### **Section 7 - Bid Opening & Preliminary Examination of Technical Bids**

1. Bids should be submitted by the EBs by the scheduled time mentioned in Section 1 above. The bids will be opened by a duly constituted Committee at the scheduled time mentioned in Section 1 above. The bid opening will be held online and the link will be shared with the EBs. The technical bids shall be opened online in the presence of the authorized representatives of the bidders.

2. After bid opening, TRAI shall examine the bids to determine whether they are in order and are in compliance with the requisite formats. Eligibility and compliance to all the technical forms as per Annexure C would be the first level of evaluation. Only those bids which comply with the eligibility criteria will be taken up for further technical evaluation.

3. If a bid is not substantially responsive, it may be rejected by TRAI and may not subsequently be made responsive by the EB by correction of the non-conformity.

## Section 8 - Evaluation of Bids

The technical & financial evaluation will be based on the following broad parameters:

1. Combined Quality Cum Cost Based System (CQCCBS) will be referred to for selecting the EB.
2. The technical bids shall be evaluated by the Technical Evaluation Committee of TRAI. Upon evaluation, the bids shall be awarded technical score. For technical scoring, the EB may be asked to make a presentation before TRAI on the technical proposal submitted by them.
3. For awarding the technical score on basis of information submitted in the technical bid, marks shall be awarded as follows:-

S. No.	Criteria for Technical Evaluation of Bids	Max Marks
1	<b>Experience of EB</b>	<b>15</b>
	Experience in Telecom/Broadcasting sector in development/maintenance of portal & app (1 mark for each work order)	5
	Experience in development/maintenance of portal & app for any Govt. Dept of value more than 15 lakh during the last 3 years (1 mark for each work order).	5
	Exp. in design & development of website/web portal with STQC Certificate for complying GIGW guidelines (1 mark for each work order).	5
2.	<b>Understanding of project</b>	<b>10</b>
	Brief of TRAI requirements	4
	Analysis	3
	Interpretations	3
3.	<b>Proposed Development methodology and Solution proposed</b>	<b>40</b>
	Study and analysis of existing /similar Mobile apps/portals and include best practices in design	10
	EB can provide wireframes/working models. The purpose is to visualize the various forms / screens/ process flow and integration in system	20
	Process improvement/ improvisation to effectively reduce turnaround time/ Development Methodology (SDLC)	10

4.	<b>Proposed Architecture, Security Features and Technology Stack</b>	<b>10</b>
	VM requirements	3
	Data flow	2
	Advanced security enhancements protocols/ standards	2
	Tools, database etc.	3
5.	<b>Proposed Timelines</b>	<b>10</b>
	Detailed activity plan, deliverables, etc.	10
6.	<b>Proposed maintenance methodology</b>	<b>15</b>
	Proposed methodology/process for maintenance.	10
	Proposed change/enhancements in App/Portal within quoted annual AMC cost.	5
<b>Total (out of 100)</b>		<b>100</b>

4. The bids scoring technical score less than 75 shall be disqualified and their financial bids will not be opened. The technically qualified bidders shall be informed and date of financial bid opening shall be intimated to them. Interested technically qualified bidders may attend the financial bid opening. Financial bids shall be opened at the prior declared date and time.

5. For selection of EB, 70% of weightage will be given to the technical score of the individual EB and 30% weightage shall be given to their corresponding financial quote. The EB scoring highest score out of 100 will be awarded the project.

6. Proposal with the lowest cost shall be given a financial score of 100 and other proposals shall be given financial scores that are inversely proportional to their prices.

7. The total score, both technical and financial, shall be obtained by weighing the quality and cost scores and adding them up.

8. As an example, the following procedure shall be followed. In a particular case of selection of EB, minimum qualifying marks for technical qualifications is 75 and the weightage of the technical bids and financial bids is 70:30. In response to the RFP, 3 proposals, A, B & C were received. The technical evaluation committee after evaluation awarded them 75, 80 and 90 marks respectively out of 100. The minimum qualifying marks were 75. All the 3 proposals were, therefore, found technically suitable and their financial proposals were opened after notifying the date and time of bid opening to the successful participants.

The price evaluation committee examined the financial proposals and evaluated the quoted prices as under:

<b>Proposal</b>	<b>Bid Amount</b>
A	Rs.120.
B	Rs.100.
C	Rs.110.

Using the formula  $LEC / EC$ , where LEC stands for lowest evaluated cost and EC stands for bid amount, the committee gave them the following points for financial proposals:

$$A : 100 / 120 = 83 \text{ points}$$

$$B : 100 / 100 = 100 \text{ points}$$

$$C : 100 / 110 = 91 \text{ points}$$

In the combined evaluation, thereafter, the evaluation committee calculated the combined technical and financial score as under:

$$\text{Proposal A: } 75 \times 0.70 + 83 \times 0.30 = 77.4 \text{ points.}$$

$$\text{Proposal B: } 80 \times 0.70 + 100 \times 0.30 = 86 \text{ points}$$

$$\text{Proposal C : } 90 \times 0.70 + 91 \times 0.30 = 90.3 \text{ points.}$$

The three proposals in the combined technical and financial evaluation were ranked as under:

$$\text{Proposal A: } 77.4 \text{ points : H3}$$

$$\text{Proposal B: } 86 \text{ points : H2}$$

$$\text{Proposal C: } 90.3 \text{ points : H1}$$

Proposal C at the evaluated cost of Rs.110 was, therefore, declared as winner and recommended for approval, to the competent authority.

### **Section 9 – Issue of Work Order**

1. TRAI shall issue the work order to the selected EB.
2. The selected EB shall appoint a single point of contact, with whom TRAI shall coordinate, for any activity pertaining to the requirements of this RFP.
3. Objection, if any, to the work order must be reported to TRAI by the EB within three (03) working days from the date of receipt or date of email, whichever is earlier; otherwise, it shall be assumed that the EB has accepted the work order in totality.

4. Performance Bank Guarantee:

- (a) The selected EB shall submit a Performance Bank Guarantee (PBG) for an amount equivalent to three (3) percent of the development and security audit charges in favour of TRAI, Delhi, valid for a period of three (3) months beyond the date of completion of warranty period, towards security deposit for the development and warranty period.
- (b) Before start of the AMC period, the selected EB shall submit another PBG for an amount equal to three (3) percent of the total AMC amount for 02 years valid for a period of three (3) months beyond the date of completion of AMC period.
- (c) In the event of the agreement being extended by TRAI in accordance with the terms and conditions of this agreement, the selected EB shall furnish Performance Bank Guarantee which shall have validity upto three (3) months beyond the extended period of the contract.
- (d) The Performance Bank Guarantee shall be forfeited by TRAI in the event of breach or non-observance of any condition of the present agreement.

5. Confidentiality: The selected EB shall maintain absolute confidentiality about all data/information etc., made known or revealed to the selected EB or such data, information, etc., to which the selected EB or its employees have access in the course of execution of the agreement. The selected EB shall be liable to fully compensate TRAI for any breach of this condition on the part of its employees. The decision of TRAI as to the quantum of compensation to be recovered from the selected EB for any such breach of confidentiality shall be final and binding on the selected EB and the recovery of such compensation shall be without prejudice to any action which may be taken by TRAI against the selected EB and / or his employees jointly or severally, in accordance with law. If, during the contract period, TRAI has reasons to believe that the selected EB has failed to maintain absolute confidentiality about the data or information made known or revealed to the selected EB during the course of execution of the agreement, without prejudice to the other legal remedies available to TRAI under any other law for the time being in force for such breach, TRAI reserves the right to terminate the contract without giving any advance notice to the selected EB of such termination.

## Section 10 – Payment Terms

1. Payment shall be released, on acceptance of deliverables & milestones, as per the following schedule –

Milestone	Deliverable	Payment to be released
<b>Development of the Project</b>		
i. Project Kick start	Project plan	10%
ii. Requirement gathering	SRS	10%
iii. Design & Development	Source code and related documents	10%
iv. Test Reports	UAT & Go live	60%
v. Warranty & Support	Satisfactory completion	10%
<b>Maintenance of the Project</b>		
Maintenance of App & Portal (Period 2 years)	Bi-annual payments shall be released on completion of rendering satisfactory services.	4 installments

2. Bill should be generated only after acceptance of deliverable by TRAI.
3. EB must raise their bills / invoices in the name of TRAI, New Delhi.
4. The payment to the EB shall be made upon submission of pre-receipted invoice/bills, to TRAI, in triplicate.
5. Payment will be made only after submission of the bill along with all the supplementary documents and after deducting the applicable penalty, if any. Payment shall be subject to the deductions, if any, for which the EB is liable under the empanelment or RFP conditions. Further, all payments shall be made subject to the deduction of Tax deducted at source (TDS) as per the current Income-Tax Act and /or any other Govt. orders / rules.
6. All payments will be made through electronic mode only.

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**Scope of Work**

1. This document is a Request for Proposal (RFP) for a system study, design, development, testing, implementation & maintenance of Mobile App (for managing Unsolicited Commercial Communication (UCC) and Reporting dashboard/portal.
2. All development(s) & enhancement(s) shall be done at par with the best of industry standards in minimum span of time & maintenance of the same shall be done to the satisfaction of TRAI.
3. Features in App and Dashboard shall not be limited to existing application. Detailed features/requirements shall be finalized during the requirement gathering phase.
4. The solution shall cover development and maintenance of:
  - (a) Mobile App (both Android and iOS) & Portal shall be developed for consumers & TRAI with industry standard User Interfaces and new technological design patterns.
  - (b) An interactive dashboard shall be developed which contain various data analytics and reports based on data collected through Apps & APIs. Dashboard layout e.g. graphs, chart, visual, comparison pie chart etc. shall be finalized during the requirement gathering phase and it may change as and when required.
  - (c) UCC Dashboard shall also be containing various reports like total number of complaints, complaint status wise report, TSP wise report, LSA wise report, complaint category wise report, complaint related to header report etc.
  - (d) Detailed reports requirements for UCC dashboard shall be finalized during the requirement gathering phase.
  - (e) Data shall be made available in public domain in customized form. Data shall be published in an interactive manner, for e.g. graphs, charts, comparison pie chart, csv, pdf, excel etc.
  - (f) End to end integration (via APIs) & API testing of Mobile App & Portal with TSPs platforms.
  - (g) End to end API testing shall be the responsibility of EB and issues shall be communicated to respective TSPs as and when required.
  - (h) Bug fixing support shall be provided to TSPs as and when required.

5. The design of Application should be robust, scalable, interoperable, modular so that it can be integrated with other TRAI applications/portals. EB shall be required to provide and extend all the necessary support facilitating exchange of data across various applications.
6. The EB shall provide necessary support for integration of App (like SDK etc.) with other Apps as identified by TRAI, like UMANG App managed by Govt. of India.
7. The EB shall update App to be compatible to the latest version of both Android and iOS. Such updates shall also be provided to the UMANG team.
8. Application shall be hosted in NIC cloud and security auditing shall be done by EB. The EB shall also be responsible for server monitoring.
9. The EB shall ensure 99% uptime and will take immediate action in case of bugs related to the application. The EB shall ensure that in a given instance, the system should not be down for more than 4 hours.
10. The EB shall address device compatibility / responsive forms related issues.
11. The EB shall be responsible for testing of patches / application.
12. The EB shall fix security vulnerabilities whenever any issue occurs.
13. The EB shall be responsible for patch deployment on production server.
14. The EB shall keep & provide up-to-date source codes and necessary documentation in repositories (like GITLAB etc.) as identified by TRAI or whenever any modification is made. The source codes shall comprise of Android App, iOS App & Portal. Apps shall be released through code available on repository only. Apps releases shall be managed by EB however if TRAI wishes to manage the same itself, then the EB shall provide all necessary support in complete release process.
15. The EB shall be responsible for version control & management of the App & Portal source code.
16. The EB shall provide a walk-through of App & Portal whenever there is any update made to them.
17. The EB shall provide data management like storage monitoring on all VMs, backup, purging, archiving, retrieving etc. optimizing database for optimum utilization of available infrastructure.
18. EB shall maintain and provide month-wise data to TRAI in geo-spatial format, raw & processed logs. EB shall also provide ad-hoc reports to TRAI as when required.

19. The EB shall be responsible for safeguarding system/application software from security threats. EB shall always keep App, Portal, Application software, OS, etc. updated with the latest version. EB shall be responsible for deployment of patches in order to keep App, Portal, Application software, OS, etc. updated or as per advisories received by TRAI from NIC or any external agency.
20. The EB shall be responsible for fulfillment of ad hoc requests (report/data/information).
21. The EB shall be responsible for server monitoring, including monitoring of:-
  - (a) Resources utilization
  - (b) System Software (database, application/web servers, containers etc.)
  - (c) Load (requests)
  - (d) Security aspects
22. Only upon due intimation and approval of TRAI, the EB shall make changes in the settings in the system for improving the app/portal performance.
23. The EB shall maintain all records and provide on a quarterly basis the bug list, issue list, no. of maintenance calls, status of issues, list of regular maintenance activities/monitoring of the system, backup and restore demonstration, root cause analysis and performance report to TRAI.
24. The EB shall update the Application/Database as and when required.
25. If any changes in the settings are warranted in the system for improving the system/ network performance, such changes shall be initiated by the EB upon due intimation and approval of the TRAI.
26. EB shall provide a support email on Play Store & App Store to receive comments/email from users. The credentials of the email shall also be shared with TRAI. The EB shall monitor the reviews/comments received on Play Store & App Store, on email or shared by TRAI, and shall diagnose, do required root cause analysis and reply accordingly. In case any update is required in the App/Portal, EB shall implement the same.
27. EB shall assign persons (as Primary & Secondary Point of Contact) to assist TRAI in reporting errors and in providing first-line support in the use and operation of the App/portal, whose contact information (both mobile no. and email ID) should be provided to TRAI.
28. Incident reporting shall be done by EB. All the reported incidents with current status and RCA shall be provided by EB to TRAI on the regular basis.
29. EB may refer present App for features and functionality, i.e. DND 2.0 which is available on Play/App Store. Detailed features/requirements shall be finalized during the requirement gathering phase.

## **Features of Existing DnD App**

1. TRAI envisions a scalable model in which consumers (through App) can securely communicate with the platforms managed by TSPs. The IT application will facilitate customers to set and get preference, set and get complaint status, get and revoke consent, Get and set appeal also.
2. App shall have features to mark SPAM calls through machine learning.
3. The process flow is conceptualized as follow:
  - (a) Consumers shall be able to access App.
  - (b) Each Consumer shall be validated through OTP, sent by TSP, against 10 digits valid mobile number.
  - (c) The validation of consumers shall be done by TSP, when triggered by App.
  - (d) Upon successful validation, consumers will get authorization token to fetch further details.
  - (e) In the reference of 10 digits validated mobile number, the user shall get preference detail, preference history details and also be able to set preference.
  - (f) Provide facility to register DND preference, full DND/choose preference for partial DND by categories, mode of communication, days, time band etc, as per schedule II of TCCCPR, 2018.
  - (g) Users can find details of already submitted complaints and the App shall facilitate submitting UCC SMS/Call Complaints.
  - (h) All complaints shall be registered by APP and communicate to TSPs. No filter should be imposed by APP. TSPs will take input and register it as a complaint or report, as per the policy of industry. APP shall only fetch the appropriate complaint status for displaying the same on TRAI APP.
  - (i) Users shall be able to get details of appeals regarding action taken by TSPs on their complaints and also be able to set appeals.
  - (j) Apps should also communicate the category of complaint to TSPs.
  - (k) Option for complaint booking, preference set directly through App without need to send SMS.
  - (l) While registering complaints against voice calls, App shall have the option to register complaints against Auto dialer call (connectivity to live agent), prerecorded call/Announcement, robo call, silent call etc. App should also communicate this information to TSPs.
  - (m) Users can find details of their already given consent, consent template details. Also, users can initiate the facility to revoke consent and see the status of consent against header and content template.
  - (n) For PE detail query, APP shall have facility to Query of any particular header by typing that header, or by fetching from the call logs directly (as option available for complaints).

4. Mobile application details shall be as mentioned below but this is not limited and shall be finalized during requirement gathering phase-

Stakeholders	Interaction with system
Consumers	P-0 Enter 10 digits valid mobile number
	P-1 Validate User
	P-2 Interactive dashboard from where user can go on required option
	P-3 Preference Details and set preference
	P-4 View complaint details and submit UCC SMS/Call Complaint
	P-5 Get Consent template details and revoke consent
	P-6 Set appeal and get status of already submitted Appeal

5. Portal details shall be as mentioned below but this is not limited and shall be finalized during requirement gathering phase -

Stakeholders	Interaction with system
TRAI	P-0 Login page
	P-1 Interactive dashboard from where users can go on required options
	P-2 View filter based detailed report
	P-3 Get option to download reports in required format. For e.g. csv, excel, pdf etc.
Consumers	P-0 View published customized reports in an interactive manner, for e.g. graphs, charts, comparison pie chart, csv, pdf, excel etc.

6. Annexure E contains the tentative description, functionality, JSON (Request/ Response) parameters, URL, method individually for each API.

7. The APIs (Request/Response) are the minimum indicative set of APIs to be developed by the EB. During the implementation if more APIs (Request/Response) are needed, EB shall define and develop them too.

**Maintenance Terms & Conditions**

1. The scope of work under maintenance services includes management & assisted operations, support services, preventive maintenance and breakdown/curative maintenance. The underlying philosophy of the maintenance services is to maintain the operation of Apps/Portal running under all conditions with timely and prompt attendance to faults so as to maintain the availability of all modules/software applications in portal and Mobile app.
  
2. The support functions shall include the following:
  - (a) Onsite/Remote Support and Technical assistance including On-line Assistance, etc.
  - (b) Support for Operations & Management Activities. Operational Training to new joinees/officers in TRAI.
  - (c) Operational Issues & Bug Fixing: This includes handling of all the minor, major (non-critical) and critical problems of the CMS Application, their repair and restoration. The EB shall extend all the cooperation to the client in identifying & rectification of the faults in the shortest possible time.
  - (d) Maintenance of existing code, Version control & management of the application source code,
  - (e) Documentation: Submission of Status reports (quarterly) to the TRAI.
  - (f) Periodic Releases: Update of apps shall be done on quarterly basis and/or on release of new version of Android/iOS.
  - (g) Application related optimizations shall be done regularly in order to enhance its performance, as and when necessary as limited to the scope of this agreement.
  - (h) Data statistics of previous quarters will be stored periodically in Archive Server in report format for client analysis purposes.
  - (i) For backup & recovery purposes, database snapshots will be stored periodically on cloud for backup and recovery of database and application. TRAI shall provision necessary space on VM. The EB shall have to periodically test the backup data and restore system from backup at least once in 6 months.
  - (j) Appropriate Measures shall be taken for safeguarding the application software from security threats: Safety of application software as per CERT-IN norms shall be assured by EB.
  - (k) Patch management of Application software shall be taken care of along with system requirements.
  - (l) EB shall do server / Cloud/ VM monitoring, which includes monitoring of Resource Utilization, System Software (database, Application/web servers, and containers), Network, Load (requests) & security aspects.
  - (m) If any changes in the settings are warranted in the system for improving the system/ network performance, such changes shall be initiated by the EB upon due intimation and approval of the TRAI.

- (n) TRAI's designated officials shall also extend cooperation to the EB in maintaining the system with minimum downtime and maximum availability. They shall be associated with all maintenance & trouble shooting works along with EB's engineer(s), wherever feasible.

3. Review meetings: Periodic review meetings, on agreed date & time, shall be held during the contract period to review the technical, operational, quality and any other aspects of the services delivered through the contract. The review meetings shall be attended by the senior representative of EB. The meeting agenda shall inter-alia include but not limited to the following:

- (a) Services related issues.
- (b) Issues related to unattended faults/ problems
- (c) Upgradation issues.

4. Whenever any major outage occurs in any part of the network, an emergency meeting may be called, if so desired by the TRAI. Outage related issues in the context of cause, correction and prevention shall be discussed in the meeting.

5. **Change Management:** Keeping in view the system requirements, if any change is required in the software or for development of any additional functionality, the following Change Management Process shall be implemented:

- (a) In case of any major change-
  - (i) on receipt of change request from TRAI, the EB shall create a formal description of change Request.
  - (ii) EB shall submit a proposal for Impact Analysis and Timelines and Implementation cost, if there is a major change in requirements.
  - (iii) TRAI may evaluate the proposal and approve.
  - (iv) Additional Purchase order shall be issued to EB for the change request.
  - (v) Implementation and UAT.
  - (vi) All technical documents need to be revised in accordance with the change.
  - (vii) EB shall maintain versioning of software.
- (b) Minor enhancements shall be provided free of cost during Execution & AMC period. The commercials for additional modules or Major enhancements shall be decided mutually by EB and TRAI. Both Parties shall decide upon the nature of change request(s) being proposed.

6. Availability: "Availability" refers to the percentage calculated through the following formula:

$$\text{Formula: } \frac{(\text{Scheduled Hours} - \text{Actual Downtime}) \times 100}{\text{Scheduled Hours}}$$

- (i) Scheduled Hours: "Scheduled Hours" means the aggregate number

of hours in the given reporting period during which applications have to be available for use by the designated users.

- (ii) Total Downtime: “Total Downtime” means, out of the Scheduled Hours, the aggregate number of hours in the reporting period during which applications were unavailable (fault severity Critical as mentioned in penalty section) for use by the designated users.

7. Penalty for System Availability SLA:

EB will ensure 99% uptime of application software provided by EB and will take immediate action in case of bugs related to the application with SLA as below:

<b>Fault Severity Level</b>	<b>Resolution Time*</b>	<b>Penalty beyond Resolution Time</b>
Critical+	Within 24 Hours	Rs. 200 Per Day (limited to maximum 5% of the AMC charges per annum)
Non-Critical#	Within 72 Hours	Extension of maintenance services for 7 days at no additional cost to Client (limited to maximum 30 days extension per annum)

\*Resolution Time: “Resolution Time” means the time taken to resolve the incident or to provide an acceptable work around for the incident.

+Critical – Major functionalities severely impaired due to application software failure. However, any underlying system infrastructure related failures will not be included in it.

#Non-Critical –

- (i) Severely constrained availability of application.
- (ii) Any other issues that hampers accessibility of other functionalities (i.e. admin and report module) is not working as per expected behavior.

\*\*\*\*\*

<b>S. No.</b>	<b>Documents to be submitted for Technical Evaluation</b>
1	RFP document duly signed by authorized person(s) with seal
2.	Authorisation Letter
3	<b>Experience of EB</b>
	Experience in Telecom/Broadcasting sector for similar work
	Experience in development/maintenance of portal & app for any Govt. Dept of value more than 15 lakh during the last 3 years
	Exp. in design & development of website/web portal with STQC Certificate for complying GIGW guidelines
4.	<b>Understanding of project</b>
	Brief of TRAI requirements
	Analysis
	Interpretations
5.	<b>Proposed Development methodology and Solution proposed</b>
	Study and analysis of existing /similar website and Mobile apps and include best practices in design
	EB can provide wireframes/working models. The purpose is to visualize the various forms / screens/ process flow and integration in system
	Process improvement/ improvisation to effectively reduce turnaround time/ Development Methodology (SDLC)
6.	<b>Proposed Architecture, Security Features and Technology Stack</b>
	VM requirements
	Data flow
	Advanced security enhancements protocols/ standards
	Tools, database etc.
7.	<b>Proposed Timelines</b>
	Detailed activity plan, deliverables, etc.
8.	<b>Proposed maintenance methodology</b>
	Proposed methodology/process for maintenance.
	Proposed change/enhancements in App/Portal within quoted annual AMC cost.

(On Company Letter Head)

**Subject: Financial Bid for Development and Maintenance of Mobile App (for managing Unsolicited Commercial Communication) and Reporting Dashboard/Portal**

<b>Resource Allocation &amp; Efforts Estimation</b>					
<b>A. Development Charges (along with 1 year warranty &amp; support)</b>					
S. No.	Resource Role	Resource Nos	Duration (in Months)	Rate (Rs.)	Amount (Rs.)
1.					
2.					
3.					
.....					
<b>Total Development Charges (including 01 year warranty &amp; support)</b>					
<b>B. Annual Maintenance Charges (for 2 years)</b>					
S. No.	Resource Role	Resource Nos	Duration (in Months)	Rate (Rs.)	Amount (Rs.)
1.					
2.					
3.					
<b>Total Annual Maintenance Charges (for 2 years)</b>					
<b>C. Security Audit Charges</b>					
S. No.	Description				Amount (Rs.)
1.	Security audit charge through Cert-in empaneled agency				
<b>Total Project Cost (A+B+C)</b>					
Total Project Cost In words (Rupees .....)					
.....)					

**\*Price Quoted are exclusive of taxes.**

**\*\* For financial bids, NICSII Tier-III website services – Manpower Role-wise rates shall be upper limit.**

**Date** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Name:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

**Company Seal**

\*\*\*\*\*

**1. Introduction**

This REST API document describes the API details to be invoked by the operator to manage preferences.

**1.1 Get OTP**

Invoke this API to get the OTP. Pass valid 10-digit mobile number as a parameter.

**URL:** <https://XX.XX.XX.XXX/api/getotp/>

**Method:** POST

**Parameters:**

**Request Parameters:**

Parameter	Data Type	Description	Remarks
msisdn	Integer (10)	Valid 10-digit Mobile Number	Mandatory, Ex: 95XXXXXXXX

**Response Parameters:**

Parameter	Data Type	Description	Remarks
status	Integer	Success/error code	Response code as define in annexure 6.1

Note(s):

1. Validity of OTP is: 300 Sec
2. Get OTP and Verify OTP is rate limited to 5 requests per minute per msisdn. After this limit Get/Validate OTP requests are not accepted upto 2 hours per msisdn.

Sample:

Request:

```
{  
  "msisdn":95XXXXXXXX  
}
```

Response:

The response will be in JSON format.

Status 200 refers to the success response.

Success response:

```
{  
  "status": 200  
}
```

Failure Sample response.

```
{  
  "status": 503  
}
```

**1.2 Validate OTP:** Invoke this API to validate OTP for validation of user. Pass valid 10-digit mobile number and OTP.

**URL:** <https://XX.XX.XX.XXX/api/validateotp/>

**Method:** POST

**Parameters:**

**Request Parameters:**

Parameter	Data Type	Description	Remarks
msisdn	Integer (10)	Valid 10-digit Mobile Number	Mandatory, Ex: 95XXXXXXXX
otp	Integer (6)	Received OTP	Mandatory, Ex:234554

**Response Parameters:**

Parameter	Data Type	Description	Remarks
status	Integer	Success/error code	Response code as define in annexure 6.1
refno	String	Reference Number	Reference Number which will be used to get access token in API 1.3

Sample:

**Request:**

```
{
"msisdn":95XXXXXXXX,
"otp":234554
}
```

**Response:**

The response will be in JSON format.  
Status 200 refers to the success response.  
Success response:

```
{
"status": 200
"refno": "AIR234F"
}
```

Failure Sample response.

```
{
"status":500
}
```

**1.3 Authorization Token**

Invoke this API to get access and refresh tokens. Access token will be required to invoke any further API requests.

The access token will be valid for **6 hours** from the time it is created. The user must get a new access token for every 6 hours.

The refresh token is valid for 30 days.

**URL:** <https://XX.XX.XX.XXX/api/token/>

**Method:** POST

**Parameters:**

**Request Parameters:**

Parameter	Data Type	Description	Remarks
username	string (20)	Username configured for the account	This will be unique and specific for each operator
password	string (20)	Password configured for the account	This will be for above mentioned username
msisdn	Integer (10)	Valid 10-digit Mobile Number	Mandatory, Ex: 95XXXXXXXX
deviceid	String(20)	Device ID	
appid	String(30)	Application ID	
refno	String (20)	Refno received in response of validate OTP API 1.2	Reference numbers will be used for getting token API. Ex: AIR234F

**Response Parameters:**

Parameter	Data Type	Description	Remarks
refresh	String	Refresh token	
access	string	Access token	

Note: The received access token must be passed in authorization header as bearer token for all the preferences related requests. This access token will be used to call all the further APIs.

Ex: Authorization: Bearer <access token>

Sample:

**Request:**

```
{
"username":"abcd",
"password ":"2345",
"msisdn":95XXXXXXXX,
"deviceid":"SM1256",
"appid":"12666336",
"refno":"AIR234F"
}
```

**Response:**

The response will be in JSON format.

Success response:



```
R1M2ZmYzFiNjM
iLCJ1aWQiOjk1fQ.GrUjW4shdeQHk4rKhK19kPs5bedX3baaAt1UgeuEtTo"
}
```

**Response:**

The response will be in JSON format.

Success response:

```
{
"access": "eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJ0b2t1b190eXBlljoiYWNjZ
XNzLi
wiZXhwIjoxNTQ1ODg3OTk0LCJqdGkiOiIwYjVhMmQzMWYyYmM0NmE3YWI2Mj
ZlZD AzMTA4ZDFkNyIsInVpZCI6OTV9.joB_MjW1tCrFXGOJGROnIUE0-
cBaC5U- mYQ0B6qqp8"
}
```

Failed response:

```
{
{
"status": 401,
"message": "Token is invalid or expired"
}
```

**2. Preferences**

**2.1 Get Current Preference Details**

Invoke this API request to get current preference details for a msisdn.

**URL:** <https://XX.XX.XX.XXX/api/preferences/currentpreferences/>

**Method:** POST

**Parameters:**

**Request Parameters:**

Parameter	Data Type	Description	Remarks
msisdn	Integer (10)	Valid 10-digit mobile number	(Mandatory), Ex: 95XXXXXXXX

**Response Parameters:**

Parameter	Data Type	Description	Remarks
status	Integer	Status codes	As defined in 6.1
msisdn	Integer (10)	Valid 10-digit mobile number	Ex: 95XXXXXXXX
cmode	String	Blocked communication modes (Full / Partial)	Ex: 11,12
crtr	String	Who created this entry	Ex : VIL vil.com

		in DLT	
ctgr	String	Blocked categories	Ex : 3,4
cts	String	Time when record was created	Ex : 1564545450
day	String	Blocked days	Ex : 31,32
time	String	Blocked time bands	Ex : 21,22,23,29
lrn	String	LRN of subscriber	Ex : 5788
ptype	String	msisdn type 1=fixed line, 2=mobile	Ex : 2
reqno	String	DLT unique reference number	Ex :11031157320 14170793
rmode	String	Channel from which this request was received. Refer Annexure 3.2	Ex : 1
srvac	String	Circle ID of subscriber. Ref Annexure 3.4	Ex : 1
srvacname	String	Circle name of subscriber Ref Annexure 3.4	Ex : Andhra Pradesh
sts	String	Status of Preferences. A- Active, D-Deactive	Ex : A
uts	String	Time this record was updated	Ex : 1564545450

**Sample:**

**Request:**

[https:// XXXXXXXXXXXX/api/preferences/currentpreferences/](https://XXXXXXXXXX/api/preferences/currentpreferences/)

```
{
"msisdn": 95XXXXXXXX,
}
```

**Response:**

The response will be in JSON format and it contains status and current preferences.

Status 200 refers to the success response.

Success response:

```
{
```

```

"status": 200,
"preference": { "cmode": "", "crtr": "vil.com", "ctgr": "1",
"cts": "1564545450",
"day": "30",
"lrn": "5788",
"msisdn": 95XXXXXXXXX,
"ptype": "",
"reqno": "1103115732014170793",
"rmode": "5",
"srvac": "1",
"srvacname": "Andhra Pradesh",
"sts": "A",
"time": "20",
"uts": "1564545450"
}
}

```

Sample response when no preferences data is found.

```

{
"status": 404,
"preference": {}
}

```

Failure Sample response.

```

{
"status": 500,
"preference": {}
}

```

## 2.2 Set Preference

Invoke this API request to set preference. You need to pass Complete Json Object and access token for authorization.oll;

**URL:** <https://XX.XX.XX.XXX/api/preferences/setpreference/>

**Method:** POST

**Parameters:**

### Request Parameters:

Parameter	Data Type	Description	Remarks
msisdn	Integer (10)	Valid 10-digit mobile number	Mandatory, Ex: 95XXXXXXXXX
cmode	String	Blocked communication modes	Mandatory, accepts empty values
ctgr	String	Blocked categories	Mandatory, accepts empty values

day	String	Blocked days	Mandatory, accepts empty values
-----	--------	--------------	---------------------------------

**Sample:**

**Request:**

<https://XXXXXXXXXXXXX/preferences/setPreference/>

```
{
"msisdn": 95XXXXXXXX,
"cmode": "11,13,15",
"ctgr": "2,3,4",
"day": "31,33,34",
"time": "24,25"
}
```

**Response:**

The response will be in JSON.

Status 200 refers to the success response.

Success response:

```
{
"status": 200,
"msisdn":95XXXXXXXX,
"reqno":"3434343434"
}
```

Failure Sample response.

```
{
"status": 500,
"message": "System error"
}
```

### 2.3 Get Preferences History Details

Invoke this API request to get preferences history details for a msisdn.

**URL:** <https://XX.XX.XX.XXX/api/preferences/preferencehistory/>

**Method:** POST

**Parameters:**

**Request Parameters:**

Parameter	Data Type	Description	Remarks
msisdn	Integer (10)	Valid 10-digit number	(Mandatory) Ex: 95XXXXXXXX

**Response Parameters:**

Parameter	Data Type	Description	Remarks
msisdn	Integer	Valid 10-digit number	Ex: 95XXXXXXXXXX
ctgr	String	Blocked categories	Ex : 3,4
cmode	String	Blocked communication modes	Ex: 11,12
rmode	String	channel from which this request was received. Refer Annexure 3.2	Ex : 8 for TRAI APP
day	String	Blocked days	Ex : 31,32
time	String	Blocked time bands	Ex : 21,22,23,29
uts	String	Time this record was updated	Ex : 1576746460
cts	String	Time when record was created	Ex : 1576746430
sts	String	Status of Preferences. A-Active, D-Deactive	Ex : A
lrn	String	LRN of subscriber	Ex : 5788
ptype	String	msisdn type 1=fixed line,2=mobile	Ex : 2
reqno	String	DLT unique reference number	Ex :1103115732014170793
srvac	String	circle ID of subscriber. Ref Annexure 3.4	Ex : 1

**Note: Latest 5 transactions are returned.**

**Request:**

<https://XXXXXXXXXXXXX/preferences/preferencehistory/>

```
{
"msisdn": 95XXXXXXXXXX
}
```

**Response:**

The response will be in JSON format and it contains status and message. Status 200 refers to the success response.

Success response:

```
{
```

```

"status": 200,
"history": [
{
"msisdn": 95XXXXXXXX,
"ctgr": "1",
"cmode": "",
"rmode": "1",
"day": "30",
"time": "20",
"uts": "1576746430",
"cts": "1576746430",
"sts": "A",
"lrn": "5788",
"ptype": "",
"reqno": "1103115732014170793",
"srvac": "1"
},
{
"msisdn": 95XXXXXXXX,
"ctgr": "1",
"cmode": "11,12,13,14,15",
"rmode": "1",
"day": "30",
"time": "20",
"uts": "1576746430",
"cts": "1576746430",
"sts": "A",
"lrn": "5788",
"ptype": "",
"reqno": "1103115732012272322",
"srvac": "1"
},
]
}

```

Sample response when no preferences history is available.

```

{
"status": 404,
"history": []
}

```

Failure Sample response.

```

{
"status": 500,
"history": []
}

```

### 3. Complaints

#### 3.1 Get Complaints Details

Invoke this API request to get complaints related to a msisdn. You need to pass

the valid 10-digit msisdn.

**URL:**<https://XX.XX.XX.XXX/api/complaints/complaintsearch/>

**Method: POST**

**Parameters:**

**Request Parameters:**

Parameter	Data Type	Description	Remarks
msisdn	Integer (10)	Valid 10-digit number	(Mandatory) , Ex: 95XXXXXXXX
acknumber	String	Acknowledgement Number which received while setting complaint	(Optional)Ex :1289838
cmpdt	JSON string	Complaint date range in epoch format. Diff between to and from date should not be more than 30 days.	(Optional) Ex : {"from_date" : "1570762007", "to_date" : "1570793007"}
pagesize	Integer	Number of records to be fetched from DLT	(Optional) Ex : 25 Default:10
pagenumber	Integer	Page indentation	(Optional) Ex : 1 Default: 1

Note: if only msisdn is passed in the request then return complaints in the last 30 days from current date.

**Response Parameters:**

Parameter	Data Type	Description	Remarks
cli	String	The header/number from which complaint received	Ex : "1400121234"
crtr	String	TAP of the complaint	Ex : "vil.com", refer annexure 7.4
ctgr	String	Category ID of the complaint Refer Annexure 3.3	Ex : 2
dcmp	String	DLT complaint id	Ex : "1109157422486999054"

desc	String	Description of UCC content	Ex : "App-Want to Study Abroad Get the best University at your favorite study destination Sign Up Now http tx9 in Bwd JJ8vTo."
msisdn	String	Mobile number	Ex : 95XXXXXXXXXX
sts	String	Status of the complaint: Open/Closed/Report	Ex : Open
srvacsub	String	Subscriber service area code. Refer Annexure 3.2	Ex : 2
headertype	String	Type of Header: P/O	Ex : "P" - Promotional O - Other( Transactional/Service Implicit/Service Explicit)
type	String	UTM or RTM	Ex : "RTM"
act	String	Action taken by TAP/OAP	Ex : "Customer not registered-RTM"
actdt	String	Action taken date by TAP/OAP	Ex : "1571037211"
uccdt	String	Date when UCC received	Ex : "1570732200"
uccty	String	Type of UCC	
uref	String	SR number	Ex : "1289842"
uts	String	Complaint Updated timestamp by OAP/TAP	Ex : "1571037216"
uby	String	Complaint updated by OAP/TAP	Ex : "vil.com", refer annexure 7.4

**Sample:**

Request:

```
{
"msisdn":95XXXXXXXXXX,
"acknumber":"1289838",
"cmpdt":{"from_date":"1570762007","to_date":"1570793007"}
}
```

Response:

The response will be in JSON format and it contains status and complaints.  
Status 200 refers to the success response.

Success response:

```
{
  "status": 200,
  "payload": [
    {
      "cli": "1400121234",
      "crtr": "vil.com",
      "ctgr": "0",
      "dcmp": "1109157079327752400",
      "desc": "Desc0",
      "msisdn": "95XXXXXXXXX",
      "sts": "Report",
      "headertype": "0",
      "type": "RTM",
      "act": "Customer not registered-RTM",
      "actdt": "1570794183",
      "uccdt": "1570645800",
      "uccty": "11",
      "uref": "1289838",
      "uts": "1570794187",
      "uby": "vil.com"
    },
    {
      "cli": "1400121235",
      "crtr": "vil.com",
      "ctgr": "0",
      "dcmp": "1109157103402422601",
      "desc": "Desc0",
      "msisdn": "9XXXXXXXXX7",
      "sts": "Report",
      "headertype": "0",
      "type": "RTM",
      "act": "Customer not registered-RTM",
      "actdt": "1571037211",
      "uccdt": "1570732200",
      "uccty": "11",
      "uref": "1289842",
      "uts": "1571037216",
      "uby": "vil.com"
    }
  ]
}
```

Sample response when no complaints data is found.

```
{
  "status": 404,
  "payload": []
}
```

Failure Sample response.

```
{
```

```
"status": 500,
"payload": []
}
```

### 3.2 Set Complaints

Invoke this API request to set complaints. You need to pass the json object and access token for authorization.

**URL:** <https://XX.XX.XX.XXX/api/complaints/setcomplaint/>

**Method:** POST

**Parameters:**

**Request Parameters:**

Parameter	Data Type	Description	Remarks
msisdn	Integer (10)	Valid 10-digit mobile Number	(Mandatory) , Ex: 95XXXXXXXX
ccli	String	The header/number from which complaint received	Mandatory
ctgr	String	Category type(1 to 8)	Mandatory
uccty	String	Type of UCC(11 for Voice, 12 for SMS)	Mandatory
ucdt	String	Date (epoch)	Mandatory cts -ucdt = <= 3 days Complaint, > 3 days & <= 30 days Report
cts	String	Complaint Date(epoch time)	Mandatory
desc	String	description of complaint (Max:500 Chars)	Mandatory
nref	String	Alternative number	Optional

**Response Parameters:**

Parameter	Data Type	Description	Remarks
msisdn	Integer	Mobile Number	Mobile Number
message	String	Success Message	Message
cts	String	Request Submitted Date	Date

acknumber	String	Acknowledgement Number	Complaint Request Number
-----------	--------	------------------------	--------------------------

**Sample:**

**Request:**

```
{
  "msisdn":95XXXXXXXXX,
  "cli": "1400121235",
  "ctgr": "0",
  "desc": "description of complaint",
  "uccty": "11",
  "uccdt": "1570732200",
  "cts": "1670732200"
}
```

**Response:**

The response will be in JSON format.  
Status 200 refers to the success response.

**Success response:**

```
{
  "status": 200,
  "payload": [
    {
      "msisdn":95XXXXXXXXX
      "message": "Complaint Submitted",
      "acknumber": "TRAI1122XX",
      "cts": "1289838",
    }
  ]
}
```

**Failure Sample response.**

```
{
  "status": 500,
  "payload": []
}
```

**4. Consent**

**4.1 Get Consent**

Invoke this API request to get consent. You need to pass 10-digit valid msisdn.

**URL:** <https://XX.XX.XX.XXX/api/getconsent/>

**Method:** POST

**Parameters:**

**Request Parameters:**

Parameter	Data Type	Description	Remarks
msisdn	Integer (10)	Valid 10-digit Mobile Number	Mandatory, Ex: 95XXXXXXXXXX
cstatus	String	Consent Status	(Optional.) Initiated/Verified/Revoked/Expired
pagesize	Integer	Number of records to be fetched from DLT	(Optional) Default: 10
pagenumber	Integer	Page indentation	(Optional)Ex: 1

**Note:** If cstatus is not passed, then consents which are Verified/Revoked/Expired are returned. Latest record comes first.

**Note:** Expired consents are the consents which are auto expired after a specific time period. Can be made active from the entity/business organization end, when consumer approaches.

#### Response Parameters:

Parameter	Data Type	Description	Remarks
status	Integer	Status Code	Annexure 6.1
cstatus	String	Consent Status.	Initiated/Active/Revoked/Expired/PortOut
entity	String	Entity ID/code	
entityname	String	Entity name	
brandnm	String	Brand name of Entity	Amazon
cstid	String	Consent template ID. This is used to get the consent scope later using one more API	
consented	String	Unique DLT ID of consent	
conacqdt	Integer	Date of acquisition of consent	epoch time

exdt	Integer	Date when this consent is going to expire(for Active consents)	epoch time
uts	Integer	Date when this status was last updated	epoch time

**Note:** Results will be returned with order by acquisition date(Recent one comes first)

**Sample:**

**Request:**

<https://XX.XX.XX.XXX/api/getconsent/>

```
{
"msisdn":95XXXXXXXXX
}
```

**Response:**

The response will be in JSON format and it contains status and message. Status 200 refers to the success response.

**Success response:**

```
{
"status": 200,
"payload":[
{
"status":"Active",
"entity":"12345",
"entityname":"HDFC BANK LTD",
"brand":"HDFC",
"ctid":"131232132434",
"consentid":"34234234234234",
"conacqdt":"1578343256",
"exdt":"1598343256",
"uts": "1578343256"
},
{
"status":"Revoked",
"entity":"12345",
"entityname":"HDFC BANK LTD",
"brand":"HDFC",
"ctid":"131232132434",
"consentid":"34234234234234",
"conacqdt":"1578343256",
"exdt":"1598343256",
"uts": "1578343256"
}
]
}
```

Failure Sample response.

```
{  
  "status": 500,  
  "payload": []  
}
```

#### 4.1.1 Get Consent Template Details

Invoke this API request to get consent template information. You need to pass msisdn and consent template ID.

**URL:** <https://XX.XX.XX.XXX/api/getconsenttemplate/>

**Method:** POST

**Parameters:**

##### Request Parameters:

Parameter	Data Type	Description	Remarks
msisdn	Integer (10)	10- digit valid Mobile Number	Mandatory, Ex: 95XXXXXXXX
cstid	String	The consent template ID returned in the get consents response.	Ex : "140012123434342"

##### Response Parameters:

Parameter	Data Type	Description	Remarks
msisdn	Integer (10)	Mobile Number	
brandnm	String	Brand name of the entity	
tcont	String	Consent template content/scope	

**Sample:**

**Request:**

<https://XX.XX.XX.XXX/api/getconsenttemplate/>

```
{  
  "msisdn":95XXXXXXXX,  
  "cstid":"xxxxxx"  
}
```

Response:

The response will be in JSON format and it contains status and message. Status 200 refers to the success response.

Success response:

```
{  
  "status": 200,  
  "message": "Success"  
}
```

```
"brandNm": "Amazon",
"tcont": "This is to take your consent to send promotions from our company",
}
```

Failure Sample response.

```
{
"status": 500
}
```

## 4.2 Revoke Consent

Invoke this API request to Revoke consent. You need to pass msisdn and consentid. Only active consents can be revoked.

**URL:** <https://XX.XX.XX.XXX/api/revokeconsent/>

**Method:** POST

**Parameters:**

### Request Parameters:

Parameter	Data Type	Description	Remarks
msisdn	Integer (10)	10- digit valid Mobile Number	Mandatory, Ex: 95XXXXXXXX
consented	String	Active Consent Unique DLT ID	Mandatory

**Note:** Consents with status Active are allowed to revoke.

### Response Parameters:

Parameter	Data Type	Description	Remarks
status	Integer	Status Code	Annexure 6.1

**Sample:**

**Request:**

<https://XX.XX.XX.XXX/api/revokeconsent/>

```
{
"msisdn":95XXXXXXXX,
"consentid":"234242543543"
}
```

**Response:**

The response will be in JSON format and it contains status and message. Status 200 refers to the success response.

Success response:

```
{
"status": 200,
```

```
"consentid":"234242543543"
}
Failure Sample response.
{
"status": 500
}
```

## 5. Header Details

### 5.1 Get Header Details

Invoke this API request to get Header and Principal entity's details. You need to pass a header.

**URL:** <https://XX.XX.XX.XXX/api/headerdetails/>

**Method:** POST

**Parameters:**

**Request Parameters:**

Parameter	Data Type	Description	Remarks
header	String(11)	Header Name	Mandatory

**Response Parameters:**

Parameter	Data Type	Description	Remarks
status	Integer	Status Code	Annexure 6.1
header	String	Header Name used by entity for sending SMS	without prefix (eg- ICICIB,HDFCBK) will be send
brandnm	String	Brand name of Entity	empty if not available, since it is not captured as of now in DLT
entityname	String	Name of Principal entity	
purpose	String	Purpose details for using header	Promotional or Transactional/Service
category	Integer	Category to which this header belongs to (1 to 8)	empty if not available Ex: 2 for Real estate, codes as per regulation
address	String	Registered address of entity	

**Note(s):**

1. brand Name will be empty for now till the time TSPs start capturing entity brand at the time of registration.

**Sample:**

**Request:**

<https://XX.XX.XX.XXX/api/headerdetails/>

```
{  
"header": "HDFCBK"  
}
```

**Response:**

The response will be in JSON format and it contains status and header's .  
Status 200 refers to the success response.

Success response:

```
{  
"status": 200,  
"headerdetails": { "header": "HDFCBK", "entityname": "", "purpose": "", "address": "" }  
}
```

Failure Sample response.

```
{  
"status": 500,  
"headerdetails": {}  
}
```

**6. Appeal- Appeal APIs to be finalized in phase 2.**

**6.1 Set Appeal**

Invoke this API request to set appeal. You need to pass Complete Json Object and access token for authorization.

**URL:** <https://XX.XX.XX.XXX/api/setappeal/>

**Method:** POST

**Parameters:**

**Request Parameters:**

Parameter	Data Type	Description	Remarks
msisdn	Integer (10)	Valid 10-digit Mobile number	Mandatory, Ex: 95XXXXXXXX
dcmp	String	DLT complaint id	Ex: "1109157422486999054"
cts	String	Current Date	Mandatory
desc	String	Description Note	Mandatory

**Response Parameters:**

Parameter	Data Type	Description	Remarks
msisdn	Integer (10)	Valid 10-digit Mobile number	
message	String	Success/Failure	
appealdcmp	String	Appeal DLT complaint Number	

**Sample:****Request:**

<https://XX.XX.XX.XXX/api/setappeal/>

```
{
  "msisdn":95XXXXXXXX,
  "dcmp":"1109157422486999054",
  "cts ":"1570732200",
  "desc":"description of complaint"
}
```

**Response:**

The response will be in JSON format and it contains status and message. Status 200 refers to the success response.

**Success response:**

```
{
  "status": 200,
  "payload":[
    {
      "msisdn":95XXXXXXXX,
      "message":"RequestSubmitted",
      "appealdcmp ":"Appeal1289838"
    }
  ]
}
```

**Failure Sample response.**

```
{
  "status": 500,
  "message": "System error"
}
```

**6.2 Get Appeal**

Invoke this API request to get appeal. You need to pass Complete Json Object and access token for authorization.

**URL:** <https://XX.XX.XX.XXX/api/getappeal/>

**Method:** POST

**Parameters:**

**Request Parameters:**

Parameter	Data Type	Description	Remarks
msisdn	Integer (10)	Valid 10- digit Mobile Number	Mandatory, Ex: 95XXXXXXXXXX
appealcmp	String	DLT complaint Number	Mandatory, Ex: Appeal1289838
apealtdt	JSON string	Appeal date range in epoch format	(Optional) Ex : {"from_date" : "1570762007", "to_date" : "1570793007"}

**Response Parameters:**

Parameter	Data Type	Description	Remarks
msisdn	Integer (10)	Valid 10-digit Mobile Number	Ex: 95XXXXXXXXXX
message	String	Success	Success/Failure
appealcmp	String	DLT Appeal complaint Number	Ex: Appeal1289838
cts	String	Current Date	
desc	String	Description on Complaint status	

**Sample:****Request:**

<https://XX.XX.XX.XXX/api/getappeal/>

```
{
"msisdn":95XXXXXXXXXX,
"appealcmp ":"Appeal1289838",
"apealtdt":{"from_date":"1570762007","to_date":"1570793007"}
}
```

**Response:**

The response will be in JSON format and it contains status and message. Status 200 refers to the success response.

**Success response:**

```
{
"status": 200,
"payload":[
{
"msisdn":95XXXXXXXXXX,
```

```

"message":"RequestSubmitted",
"appealcmp ":"Appeal1289838",
"cts ":"1570732200",
"desc ":"complaint Resolved"
},
{
"msisdn":95XXXXXXXXX,
"message":"RequestSubmitted",
"appealcmp ":"Appeal1289838",
"cts ":"1570732204",
"desc ":"complaint Resolved"
}
]
}
Failure Sample response.
{
"status": 500,
"message": "System error"
}

```

**Note: HTTP status code must be 200 for all responses from API. Other than 200 is returned if there is any issue with the service availability.**

## 7. Annexure

### 7.1 Response Codes

Error code	Description
200	Success
401	Invalid Token or token expired
404	No matching records/No data found
405	Invalid method
406	Duplicate (only for complaints)
407	DCMP Registered but SR number generation error. [For Airtel]
408	Invalid OTP
409	no. of OTP attempts exceeded (limit=5)
410	UCC Date is too old.
500	System error
501	Invalid Argument value or type
502	Parameter is missing

503	Operator mismatch
504	Invalid login credential
505	Ownership mismatch
506	Invalid/wrong TSP

## 7.2 Source/Channel Types

Code	Description
0	Migration
1	WEB
2	SMS
3	IVR
4	USSD
5	APP
6	Customer Support
7	Email
8	TRAI APP

## 7.3 Service Area Name / Code

Service Area Code	Name
1	Andhra Pradesh
2	Assam
3	Bihar
4	Chennai
5	Delhi
6	Gujarat
7	Haryana
8	Himachal Pradesh
9	Jammu & Kashmir
10	Karnataka

11	Kerala
12	Kolkata
13	MadhyaPradesh
14	Maharashtra
15	Mumbai
16	North East
17	Orissa
18	Punjab
19	Rajasthan
20	Tamilnadu
21	UP East
22	UP West
23	West Bengal

#### 7.4 Operator DLT Codes

<b>Code</b>	<b>uby/cptr values</b>	<b>Description</b>
VI	vil.com	Vodafone Idea
VO	vil.com	Vodafone
ID	vil.com	Idea
JI	jio.com	Jio
AI	airtel.com	Airtel
BL	bsnl.com	BSNL
ML	mtnl.com	MTNL
TA	tata.com	TATA
VM	vmipl.com	VMIPL
QL	qtl.infotelconnect.com	QTL
RC	rcom.com	RCOM