



Telecom Regulatory Authority of India



Draft (Second Amendment)

to

**The Telecommunication (Broadcasting and Cable) Services Standards of
Quality of Service and Consumer Protection (Addressable Systems)
Regulations 2017**

9th August, 2019

**Mahanagar Doorsanchar Bhawan
Jawahar Lal Nehru Marg,
New Delhi- 110002**

Written Comments on the draft Regulation are invited from the stakeholders by 22nd August 2019. Comments received will be posted on TRAI's website www.trai.gov.in. The comments may be sent, preferably in electronic form, to Shri Arvind Kumar, Advisor (B&CS), TRAI on the email ID arvind@trai.gov.in or sumeet@trai.gov.in

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**TO BE PUBLISHED IN THE GAZETTE OF INDIA,
EXTRAORDINARY, PART III, SECTION 4
TELECOM REGULATORY AUTHORITY OF INDIA
NOTIFICATION**

NEW DELHI, the August 2019

F. No.12-37/2019-B&CS.----In exercise of the powers conferred by section 36, read with sub-clause (v) of clause (b) of sub-section (1) of section 11, of the Telecom Regulatory Authority of India Act, 1997 (24 of 1997), read with notification of the Central Government, in the Ministry of Communication and Information Technology (Department of Telecommunications), No.39, —

(a) issued, in exercise of the powers conferred upon the Central Government under clause (d) of sub-section (1) of section 11 and proviso to clause (k) of sub section (1) of section 2 of the said Act, and

(b) published under notification No. S.O.44 (E) and 45 (E) dated the 9th January, 2004 in the Gazette of India, Extraordinary, Part II, Section 3,.....

the Telecom Regulatory Authority of India hereby makes the following regulations further to amend the Telecommunications (Broadcasting and Cable) Services Standards of Quality of Service and Consumer Protection (Addressable Systems) Regulations, 2017 (2 of 2017), namely: -

1. (1) These regulations may be called the Telecommunications (Broadcasting and Cable) Services Standards of Quality of Service and Consumer Protection (Addressable Systems) (Second Amendment) Regulations, 2019 (_____of 2019).

(2) They shall come into force after thirty days from the date of their publication in the Official Gazette.

2. In regulation 3 of the Telecommunications (Broadcasting and Cable) Services Standards of Quality of Service and Consumer Protection (Addressable Systems) Regulations, 2017, after sub-regulation (5), the following sub-regulations shall be inserted, namely: -

“(6) Every distributor of television channels shall allow the consumers to access, through any application (such as Mobile App) or portal, to view the television channels and bouquets of channels available on its platform, select the television channels or bouquet(s) of channels of their choice available on the platform, deselect any channel or bouquet(s) of channels, view their subscription details and modify their subscription.

(7) Every distributor of television channel shall enable and facilitate its website or system in such a manner that an application or portal developed by a person may have access to its platform for the purposes mentioned in sub-regulation (6):

Provided that the subscriber of the distributor shall be able to view its subscription details, make changes therein only after authentication by one-time password communicated by the distributor.

(8) Every distributor of television channel shall allow exchange of information as specified in the Channel Selection System API Specifications annexed to these regulations:

Provided that the Authority may modify the Channel Selection System API Specifications by a direction or order issued from time to time.

(S. K. Gupta)
Secretary, TRAI

Note.1: The principal regulations were published vide notification No. 21-5/2016-B&CS dated the 3rd March 2017.

Note 2: The first amendment to these regulations were published vide notification No. 21-4/2018-B&CS dated 28th December 2018 (11 of 2018)

Note 3: The Explanatory Memorandum explains the objects and reasons of the Telecommunications (Broadcasting and Cable) Services Standards of Quality of Service and Consumer Protection (Addressable Systems) (Second Amendment) Regulations, 2019 (_____ of 2019)

Explanatory Memorandum to Telecommunications (Broadcasting and Cable) Services Standards of Quality of Service and Consumer Protection (Addressable Systems) (Second Amendment) Regulations, 2019 (_____ of 2019)

TRAI, on 3rd March 2017, notified the 'New Regulatory Framework' (or the New Framework) for Broadcasting and Cable services. The new framework came into effect on 29th December 2018. However, to provide enough time to subscribers for exercising their options, the Authority provided time up to 31st January 2019.

The said framework comprises of the following regulations and Tariff Order: -

- a. The Telecommunication (Broadcasting and Cable) Services Interconnection (Addressable Systems) Regulations, 2017
- b. The Telecommunication (Broadcasting and cable) Services Standards of Quality of Service and Consumer Protection (Addressable Systems) Regulations, 2017
- c. The Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017

2. TRAI's new regulations/orders for the television and broadcasting sector gave freedom to consumers to select television channels they want to watch. To ensure proper implementation of the new framework, TRAI has made number of efforts such as series of meetings with DPOs, publicity in electronic and news media, interactions with customer groups etc. Despite of making all efforts, time and again, it is being brought to notice of the Authority that consumers are not able to make real choice of TV channels. TRAI is in receipt of several complaints from the consumers that they are not able to choose the TV channels conveniently on the web portal/apps of the DPOs. All the complaints received in TRAI were not only analysed in TRAI but also forwarded to DPOs to take necessary action and facilitate consumer choice. TRAI as special initiative conducted field inspection for some DPOs to access the process of selection of channels made available to consumers. In many cases, it was noticed that quite a few DPOs platform were not providing

adequate freedom and choice to consumers. Customers also complained that the call centre of DPOs are also not helping to facilitate consumer choice of the channels.

3. TRAI setup an internal committee to check functioning of existing APPs and websites of major DPOs. The committee observed that the process of selecting TV channels on various DPOs platform is cumbersome and the process of subsequent change in the existing subscription is even more tedious. The basic information such as details of existing TV channels subscription is also not visible to subscribers. To ensure proper choice to the consumers, the Authority also issued directions and show cause notices to some DPOs.

4. TRAI called the meeting of the DPOs to discuss the issue to provide choice to consumers. While all the DPOs time and again assured TRAI that they are taking necessary actions and their IT systems are being modified to provide consumer friendly options, nothing changed on the ground. Despite repeated efforts of TRAI, consumer complaints continued unabated and no major change to facilitate consumer choice happened on the ground.

5. It was alleged that DPO has no interest to provide consumer friendly options to consumers as easy channel selection options clashes with their own vested interest. Consumers complaint that DPOs want to impose their preferred pack/bouquet to the subscribers without providing easy options as envisaged by TRAI. They felt that DPOs interest is to maximize their revenue.

6. In order to address above issue, The Authority, in the larger public interest, felt need to have Channel Selection System developed by third party to facilitate easy channel selection by consumers. Since, third party APP will be accessible by every customer of Broadcasting & Cables Services sector, therefore, it will facilitate the easy choice to consumers. To facilitate functioning of third-party Apps, TRAI created Channel Selection System API Specifications document which prescribed common APIs with all Distribution Platform Operators (DPO). TRAI intend to mandate all the DPOs to

compulsorily share information with the apps after authenticating the subscriber so that such apps can help in easy selection of the required TV channels

7. The main objective of the API design is to enable the third-party developers to create applications to assist customers in making their choice and accordingly configure the subscription.

8. TRAI shared 'Channel Selection System API specification' document laying down specifications for Web APIs with all DPOs on 24.04.2019 to allow easy interchange of information between a Distribution Platform and a third-party app. Meeting with DPOs was also held on 30.04.2019 and 03.05.2019 to facilitate channel selection through API.

9. Following are the objectives of creating API:

- To ease TV viewing experience of the customers
- To ease selection of TV channels of their interest
- To help customers reduce TV viewing charges by optimizing their subscription

10. Some DPOs did not support the development of system proposed by TRAI and raised a few concerns such as security of subscribers' data in case it is shared. Certain modifications in document were also suggested. Most of the suggestions given by DPOs has been analysed and addressed appropriately in the revised API specification document. Adequate time was also given to DPOs if suitable actions are taken by them to address the concern of the consumers for providing easy options to select TV channels.

11. TRAI envisions a scalable model in which Consumer (through Apps/Portals) can securely communicate with the platforms managed by DPOs. The IT application will facilitate consumers to choose channels/bouquets of their interest among the offerings by their respective DPO. The IT application may suggest an optimum configuration of bouquets based on channels desired by the subscriber to reduce total monthly bill. A key requirement for TV Channel Selection System is to provide a solution that

can work throughout the country and be accessible by every customer of Broadcasting & Cables Services sector. Other requirements include evolving simple and robust solution, which is stable, scalable and secure.

12. The main concern of these DPOs during discussions was that third party will have the information related to the consumer and its subscribed plan. The proposed regulation does not allow third party developer (TPD) to know the mobile number or subscriber id to third party as all transaction will be done through session token. The process flow is as follows:

- I. Consumers shall be able to access Apps/Portals developed by TPDs.
- II. Each Consumer shall be validated through OTP against Subscriber ID or Auth token.
- III. The validation of consumer shall be done by DPO, when triggered by TPD App/Portal.
- IV. Upon successful validation, consumer will get session token to fetch further details. i.e. consumer's current subscription.
- V. Consumers shall be able to modify their current subscription either by removing existing channel/bouquet and/or adding new channel/bouquet.
- VI. The TPD's App/Portal shall submit the changes in the consumer's subscription to their respective DPO.

13. Through this draft second amendment regulation, TRAI is seeking the comments of the stakeholders on the issue of developing of App by third parties and consequent sharing of information using API between DPOs and third party developers enabling consumers to have ease in selection of channels of their choice and reduce TV viewing charges by optimizing their subscription while allowing them to view TV channels of their interest.



Channel Selection System

APIs Specifications

Telecom Regulatory Authority of India (TRAI)
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Version: 1.0

Document Version History

Version #	Author	Change Description	Publish Date
1.0	TRAI	Release with Regulation	09.08.2019

Table of Contents

	Page No.
1. Glossary of Terms.....	4
2. Introduction.....	5
3. Objectives.....	5
4. Document Objectives.....	6
5. Channel Selection IT Ecosystem.....	7
6. Process Flow of the Ecosystem.....	7
7. API Description.....	8
8. Validation of Subscriber.....	9
9. Get Subscriber API.....	10
10. Subscription Details.....	11
11. Get Subscription API.....	12
12. Platform offerings (Channels and Bouquets).....	14
13. Menu API.....	15
14. Get Channel API.....	16
15. Get Bouquet API.....	17
16. Set Subscription.....	18
17. Set Subscription API.....	18
18. Subscription Status API.....	19
19. Response Code.....	20
20. Reference 3 rd Party App.....	21
21. Compliance Aspects.....	21

1. Glossary of Terms

- **DPO:** Distribution Platform Operator stands for MSO/DTH.
- **MSO:** Stands for Multiple System Operator. MSO is the industry term for "cable company". Each cable TV installation serving a community is known as a "cable system", and the operator of the system is called the "system operator". Most system operators run cable systems in more than one community. DTH is Direct to home
- **LCO:** LCO stands for Local Cable Operator.
- **JSON:** JSON stands for JavaScript Object Notation. JSON is a lightweight format for storing and transporting data.
- **URL:** URL is the abbreviation of Uniform Resource Locator and is defined as the global address of documents and other resources on the World Wide Web.
- **OTP:** OTP stands for one-time password. It is a password that is valid for only one login session or transaction, on a **computer** system or other digital device.
- **HTTP:** HTTP stand for HyperText Transfer Protocol. The communications protocol used to connect to Web servers on the Internet or on a local network (intranet). Its primary function is to establish a connection with the server and send HTML pages back to the user's browser.
- **SUBSCRIBER:** A subscriber is a person who pays to receive channels regularly from operator.
- **HEADEND:** A headend is a facility that accepts TV signals as input from satellites, processes them into cable-quality signals, and then distributes them to homes and cable networks. It can be considered as the master distribution center where incoming television signals are received, selected, amplified and re-modulated, and sent for transmission to cable networks.
- **TPD:** Third Party Developers
- **API:** Application Program Interface
- **JWT:** JSON Web Token
- **REST:** Representational State Transfer

2. Introduction

- 2.1** This document defines specifications for Web APIs to allow easy interchange of information between a Distribution Platform and a third-party app. Such information includes the details of channels and bouquets that the platform offers to its customers, the current active subscription of a user, and the updated subscription that the user is desirous of setting.
- 2.2** The APIs are designed to enable such interchange without sharing information that either personally identifies a subscriber or which is not necessary to accomplish the task at hand.

3. Objectives

- 3.1** With TRAI's New Regulation for the Television and Broadcasting Sector having come into force, Consumers have the freedom to select Television (TV) Channels they want to watch. The main objective of the API design is to enable third-party developers create applications to assist customers in making their choice and accordingly configuring the subscription.
- 3.2** TRAI envisions a scalable model in which Consumer (through Apps/Portals) can securely communicate with the platforms managed by DPOs. The IT application will facilitate customers to choose channels/bouquets of their interest among the offerings by their respective DPO. The IT application may suggest an optimum configuration of bouquets based on channels desired by the subscriber so as to reduce total monthly bill or offer other features such as suggested packages based on user profile. The APIs by themselves, however, neither encourage nor facilitate user profiling.
- 3.3** A key requirement for Channel Selection System is to provide an integrated solution that can work throughout the country and be accessible by every customer of Broadcasting & Cables Services sector. Other requirements include evolving simple and robust solution, which is stable, scalable and secure.
- 3.4** Following are the objectives of Channel Selection IT ecosystem:
- To ease TV viewing experience of the customers

- To ease selection of channels of their interest
- To help customers reduce TV viewing charges by optimizing their subscription while allowing them to view channels of their interest

3.5 To achieve the desired objectives, the ecosystem should be interoperable and participating systems should be able to exchange information among themselves. Hence, the need for a pre-defined set of data exchange APIs.

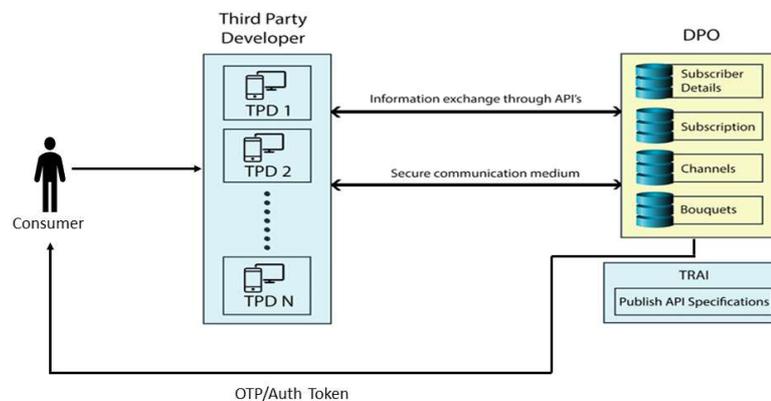
4. Document Objectives

4.1 The objective of this document is to facilitate the development of Channel Selection IT ecosystem for participating entities. The seamless interconnectivity of the participants is very crucial for the successful implementation of the ecosystem, to facilitate customer to compare and optimize the offerings available to them provided by their respective DPOs.

4.2 This document describes the base architecture of the ecosystem and elaborates the specifications for the data exchange APIs. These standard APIs shall ensure the interconnectivity among various platform which are based on different technology stacks.

5. Channel Selection IT Ecosystem

5.1 The IT applications should support **APS** (**A**cquire customer current subscriptions from DPO, **P**rovide options of channels/bouquets for selection, **S**et customer subscriptions of their choices on the DPO platform). All the three participants i.e. Customer, Third Party IT Applications & DPOs shall interact through Data APIs. The high-level architecture of the system is detailed below:



5.2 Channel Selection ecosystem's network communication should be encrypted and secured to maintain the privacy and eligibility of the data travelling through the medium. Accordingly, it is proposed to implement JWT token. This will ensure only authenticated API requests are responded.

6. Process Flow of the Ecosystem

6.1 The process flow is conceptualized as follow:

- I. Consumers shall be able to access Apps/Portals developed by TPDs.
- II. Each Consumer shall be validated through OTP against Subscriber ID or Auth token.
- III. The validation of consumer shall be done by DPO, when triggered by TPD App/Portal.

- IV. Upon successful validation, consumer will get session token to fetch further details i.e. consumer's current subscription.
- V. Consumers shall be able to modify their current subscription either by removing existing channel/bouquet and/or adding new channel/bouquet.
- VI. The TPD's App/Portal shall submit the changes in the consumer's subscription to their respective DPO.

6.2 For implementation, TPD may cache DPOs offering at their end. TPD app may also cache the DPO offerings. However, the cache may be refreshed every 24 hrs or may define their own TTL to avoid old data showing up.

6.3 Upon selection of Channels/ Bouquets, TPD may optimize the channel selection to minimize cost or any other relevant optimization offerings.

7. API Description

7.1 A set of REST APIs have been envisaged to facilitate the data exchange among participants of the ecosystem. Following are some of the minimum set of REST APIs that shall enable information exchange. APIs shall provide information from DPOs (MSOs/DTHs) regarding:

- I. Validation of Subscriber
- II. Subscription details
- III. Channels on platform
- IV. Bouquets on platform
- V. Setting Subscription changes on DPO platform

7.2 The Channels and Bouquet API can be combined in one API – Menu API. Menu API shall provide information about all the offerings on the platform. The return object size may be bigger as compared to the Channel and Bouquet API called individually

7.3 This document contains the description, functionality, data flow diagram, JSON (Request/Response) parameters, URL, method individually for each API.

8. Validation of Subscriber

- 8.1** This API will validate subscriber at DPO end. The subscriber validation can happen through subscriber's Subscriber ID or Auth Token.
- 8.2** Mobile number is the registered mobile number, which the consumer has registered with its DPO. However, a consumer can register multiple connections with same Mobile No. The Subscriber ID is allotted by DPO to its registered consumer. For every unique connection there shall be unique Subscriber ID. Corresponding to subscriber ID there is unique Subscription No.
- 8.3** Consumer shall provide its Subscriber ID. to TPD. TPD shall send the same to DPO. DPO shall send the OTP SMS to the registered mobile no. of the consumer. The SMS shall contain subscriber ID and OTP. Response SMS may also contain following text "Sample: So and so app is requesting authorization to view your subscription. If you have requested, please share the authorization code. Do not share the code if you have not initiated this request."
- 8.4** The consumer will submit the subscriber ID and OTP to the TPD. The validation will be done by DPO through TPD's App/Portal.
- 8.5** Auth token is the concept wherein every DPO hosts an interface (any of Apps, portal, IVR, SMS etc) to provide Auth Token. Their consumers can use any of the provided interface and in response DPO generates a Auth Token for each subscription mapped with a registered mobile number. For Multiple connections mapped with same registered mobile no. DPO shall generate and send multiple Auth Tokens corresponding to each subscriber ID. The validation will be done by DPO through TPD's App/Portal.
- 8.6** Upon successful validation, API will return session token, Subscription ID and some details required by the consumer to identify the subscription which they wish to modify.
- 8.7** This can be done by calling the Get Subscriber API.

9. Get Subscriber API

9.1 API Detail: Get OTP by Subscriber ID

URL	/subscriber/doAuth/				
Method	GET				
Body Parameters	S.no	Name	Mandatory	Data Type	Example
	1	subscriber_id	Yes	String	"1234"
Response	<pre>{ "status": 200, "message": "OTP has been sent" }</pre>				

9.2 API Detail: Fetch subscription summary by Subscriber ID

URL	/subscriber/doAuth/				
Method	GET				
Body Parameters	S.no	Name	Mandatory	Data Type	Example
	1	subscriber_id	Yes	String	"1234"
	2	otp	Yes	String	"4578"
Response	<pre>{ "status": 200, "accessToken": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXZWQ9.J0bJoSBg", "tokenType": "Bearer", "subscriber": [{ "subscriptionId": 12345, "amount": 525, "type": "monthly", "status": "inactive", "activationDate": "2019-07-19T08:52:04.344+0000" }] }</pre>				

11. Get Subscription API

11.1 This API will fetch details of subscribed channels & bouquets currently opted by the consumer. This will include details of channels/bouquets and their prices and total no. of ala carte channel, total no. of bouquet, total price, subscription type and available balance. If option no. 2 is followed than individual bouquet/channel details can be fetched using Get Channel and Get Bouquet API.

11.2 API Detail: Fetch subscription by Subscription ID

URL	/subscriber/getSubscription				
Method	GET				
Body Parameter	s.no	Name	Mandatory	Data Type	Example
	1	subscription_id	Yes	String	"123456"
Authorization	1	Bearer token	Yes	-	"Bearer fjhklasj"
Response	<pre>{ "status": 200, "bouquet": [{ "bouquet_id": 2001, "bouquet_name": "All South HD Value", "bouquet_price": 39, "total_channel": 3, "broadcaster": "STAR India Private Limited", "bouquetchannel": [{ "channel_id": 1001, "channel_name": "Zee TV", "category": "GEC", "language": "Hindi", "price": 19, "imageurl": "Channellogo/logo/ZeeTV.jpg", "sdhd": "SD", "broadcaster": "Zee Entertainment Enterprises Limited" }] }] }</pre>				

	<pre> }], "channels": [{ "channel_id": 1001, "channel_name": "Zee TV", "category": "GEC", "language": "Hindi", "price": 19, "imageurl": "Channellogo/logo/ZeeTV.jpg", "sdhd": "SD", "broadcaster": "Zee Entertainment Enterprises Limited" }], "total_channel": 4, "total_bouquet": 2, "amount": 525, "availbalance": 952, "activationDate": "2019-07-19T08:52:04.344+0000" } </pre>
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11.3 This API will fetch IDs of subscribed channels & bouquets currently opted by the consumer, total no. of ala carte channel, total no. of bouquet, total price, subscription type and available balance. If option no. 2 is followed than individual bouquet/channel details can be fetched using Get Channel and Get Bouquet API.

11.4 API Detail: Fetch subscription by Subscription ID

URL	/subscriber/getSubscription				
Method	GET				
Form Parameter	s.no	Name	Mandatory	Data Type	Example
	1	subscription_id	Yes	String	"123456"
Authorization	1	Bearer token	Yes	-	"Bearer fjhklasj"
Response	<pre> { "status": 200, "bouquet": [{ </pre>				

	<pre> "bouquet_id": 2001 }, { "bouquet_id": 2002 }], "channels": [{ "channel_id": 1001 }, { "channel_id": 1002 },], "total_channel": 4, "total_bouquet": 2, "amount": 525, "availbalance": 952, "activationDate": "2019-07-19T08:52:04.344+0000" } </pre>
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12. Platform offerings (Channels and Bouquets)

- 12.1** All the DPOs shall need to fetch the information regarding the Bouquets and Channels offered by the Platform.
- 12.2** This information can be fetched in two ways. Either we get all the offerings of platform by calling one API i.e. Menu API or we fetch channels and bouquet offered through Get Channel and Get Bouquet API.
- 12.3** Menu API shall provide information about all the offerings on the platform. The return object size may be bigger as compared to the Channel and Bouquet API called individually

13. Menu API

13.1 This shall be used to fetch all the offerings available on the DPO's platform. The response shall include complete list of offered channels and bouquets and their corresponding details.

13.2 API Detail: Fetch Offerings on the Platform

URL	/provider/platformoffering				
Method	GET				
Authorization	s.no	Name	Mandatory	Data Type	Example
	1	Bearer token	Yes	-	"Bearer fjhklasj"
Response	<pre>{ "status": 200, "channels": [{ "channel_id": 1001, "channel_name": "Zee TV", "category": "GEC", "language": "Hindi", "price": 19, "imageurl": "Channellogo/logo/ZeeTV.jpg", "sdhd": "SD", "broadcaster": "Zee Entertainment Enterprises Limited" }], "bouquet": [{ "bouquet_id": 2001, "bouquet_name": "All South HD Value", "bouquet_price": 39, "total_channel": 3, "broadcaster": "STAR India Private Limited", "bouquetchannel": [{ "channel_id": 1001, "channel_name": "Zee TV",</pre>				

	<pre> "category": "GEC", "language": "Hindi", "price": 19, "imageurl": "Channellogo/logo/ZeeTV.jpg", "sdhd": "SD", "broadcaster": "Zee Entertainment Enterprises Limited" }] }]} </pre>
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14. Get Channel API

14.1 This API can be used to fetch list of channels available on the platform of DPO or to fetch the details of channel through its channel ID. Channel ID parameter is optional. When channel ID as parameter is passed then details of channel will be fetched. In case API is called without any parameter then the list of channels available on the platform of DPO will be fetched.

14.2 API Detail: Fetch Channel details

URL	/provider/getChannels				
Method	GET				
Parameter	s.no	Name	Mandatory	Data Type	Example
	1	Channel_id	No	String	1001
Authorization	1	Bearer token	Yes	-	"Bearer fjhklasj"
Response	<pre> { "status": 200, "channels": [{ "channel_id": 1001, "channel_name": "Zee TV", "category": "GEC", "language": "Hindi", "price": 19, "imageurl": "Channellogo/logo/ZeeTV.jpg", </pre>				

	<pre> "sdhd": "SD", "broadcaster": "Zee Entertainment Enterprises Limited" }] } </pre>
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15. Get Bouquet API

15.1 This API can be either used to fetch list of bouquets available on the platform of MSO/DPO or to fetch the details of bouquet through its bouquet ID. This API may need bouquet ID as parameter, which is optional. When bouquet ID as parameter is passed then details of bouquet will be fetched. In case API is called without any parameter then the list of bouquets available on the platform of MSO/DPO will be fetched.

15.2 API Detail: Fetch Bouquet details

URL	/provider/getBouquets				
Method	GET				
Parameter	s.no	Name	Mandatory	Data Type	Example
	1	Bouquet_id	No	String	2001
Authorization	1	Bearer token	Yes	-	"Bearer fjhklasj"
Response	<pre> { "status": 200, "bouquet": [{ "bouquet_id": 2001, "bouquet_name": "All South HD Value", "bouquet_price": 39, "total_channel": 3, "broadcaster": "STAR India Private Limited", "bouquetchannel": [{ "channel_id": 1001, "channel_name": "Zee TV", </pre>				

		<pre> "category": "GEC", "language": "Hindi", "price": 19, "imageurl": "Channellogo/logo/ZeeTV.jpg", "sdhd": "SD", "broadcaster": "Zee Entertainment Enterprises Limited" }] }]} </pre>
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16. Set Subscription

16.1 Consumer shall be able to modify his/her current subscription. Consumer may delete some subscribed channels and bouquets or add few. TPD shall submit the changes to the DPO platform. Only incremental information i.e. changes shall be sent by the API.

17. Set Subscription API

17.1 This API will submit the request for modification in subscription with added/deleted channels & bouquets of the users to their respective DPOs. Upon successfully receiving the request, DPO platform will return acknowledge number.

17.2 API Detail: Request update subscription

URL	/subscriber/setSubscription				
Method	PUT				
Body Parameter	s.no	Parameter type / Name	Mandatory	Data Type	Example
	1	subscription	Yes	object	
Authorization	1	Bearer token	Yes	-	"Bearer fjhklasj"
Request Parameter Object	<pre> { "subscription_id": 12345, "bouquet": { "added": [{ </pre>				

	<pre> "bouquet_id": 2001 }], "deleted": [{ "bouquet_id": 2001 }] } , "channels": { "added": [{ "channel_id": 1001 }], "deleted": [{ "channel_id": 1001 }] } , "amount": 355, "type": "monthly", } </pre>
Response	<pre> { "status": 200 "message": "Subscription request submitted", "AcknowledgmentNo": "ZHT1344541255423" } </pre>

18. Subscription Status API

18.1 This API will fetch the status of subscription request. TPD sends Acknowledgment No of previous request and in response receives Subscription ID, if subscription is activated. Otherwise shall respond the status Inactive or Rejected

URL	/subscriber/getSubscriptionStatus				
Method	GET				
Form Parameter	s.no	Name	Mandatory	Data Type	Example
	1	AcknowledgmentNo	Yes	String	"ZHT1344 54125542 3"
Authorization		Bearer token	Yes	-	"Bearer fjhklasj"
Response	<pre>{ "status": 200, "subscriptionStatus": "Active" or "Inactive" or "Rejected", "subscription_id": 12345, "ActRejDate": "2019-07-19T08:52:04.344+0000" }</pre>				

19. Response Code

S. No.	API Response Codes	Response Code Meaning
1	200	Success
2	400	Bad Request/Invalid URL
3	401	Invalid Subscriber/Subscription
4	404	Parameter Mismatch
5	416	Invalid Token
6	500	Internal Server Error
7	501	Token Expired
8	502	Invalid Channel
9	503	Invalid Bouquet

20. Reference 3rd Party App

20.1 As per the API specifications s TRAI has developed a reference App to demonstrate the functionality of the API mentioned in the document.

20.2 The reference App has been developed using Open Source technology stack.

20.3 The App, **A**cquires customer current subscriptions from DPO (after validation through OTP), **P**rovides options of channels/bouquets for selection, **S**ets customer subscriptions of their choices on the DPO platform.

20.4 The source code of the reference Android App is available at below link:

<https://link.trai.gov.in/refApp>

21. Compliance Aspects

- I. Any third party may provide an App to user (for any device/OS based on market needs).
- II. The app provider must ensure user data is strongly protected.
- III. All the information should be in compliance with the new regulatory framework.
- IV. The participants are not allowed to share any customer specific information to agency/individual outside this ecosystem.
- V. TPD shall not store/maintain the database of subscribers at its own end.
