

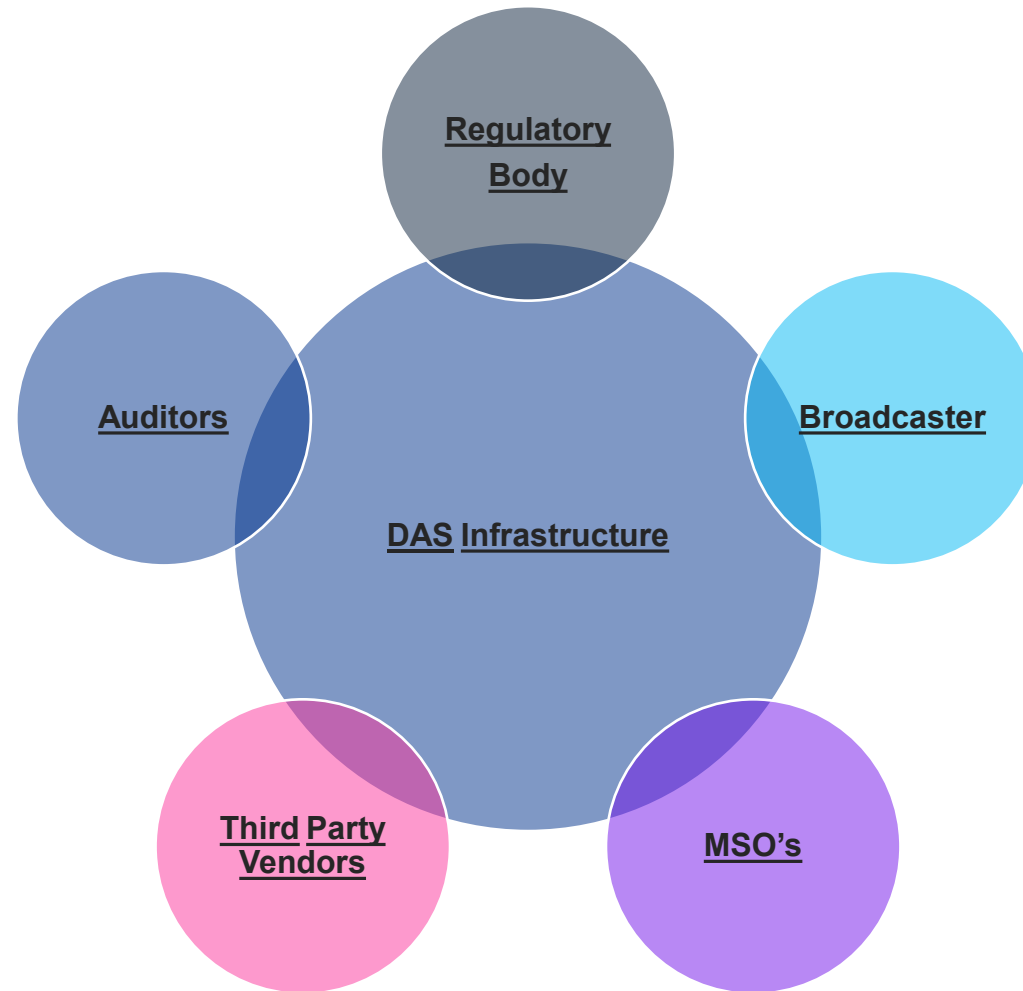


Digital Addressable Systems Audits

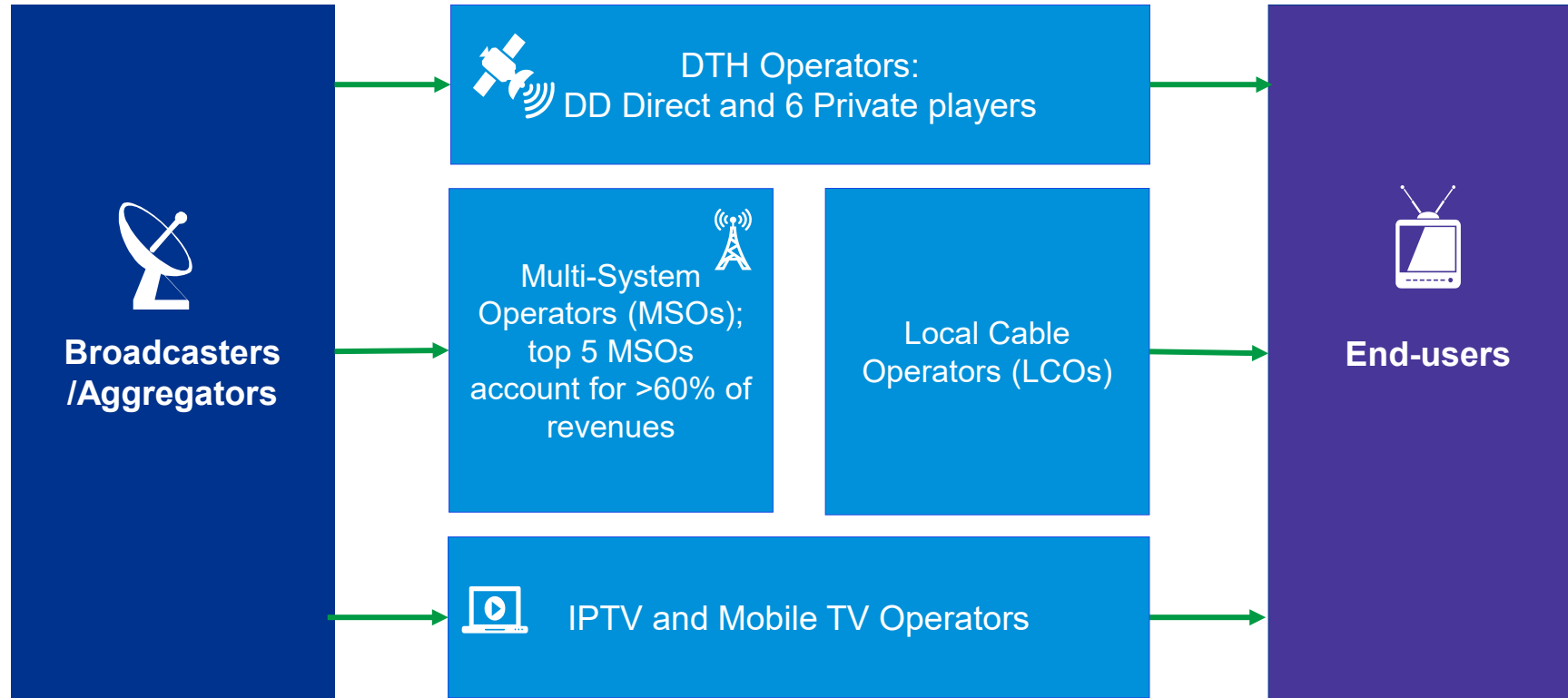
July 2026



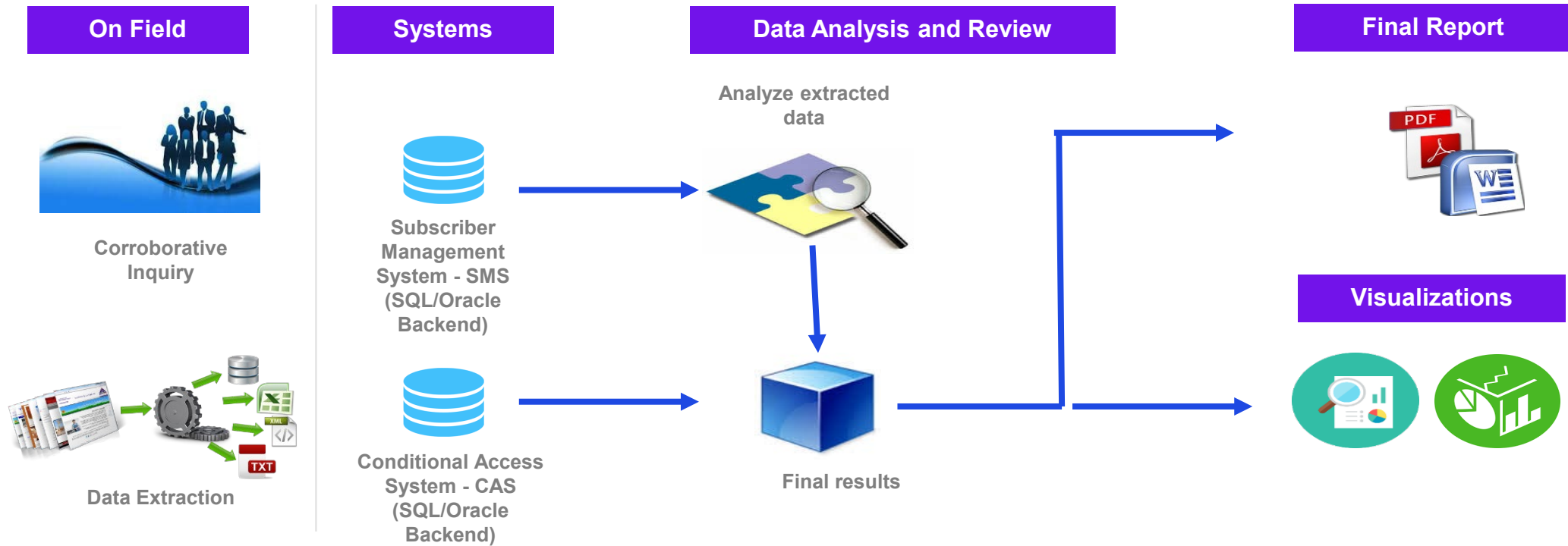
DAS Infrastructure



Broadcasting Infrastructure



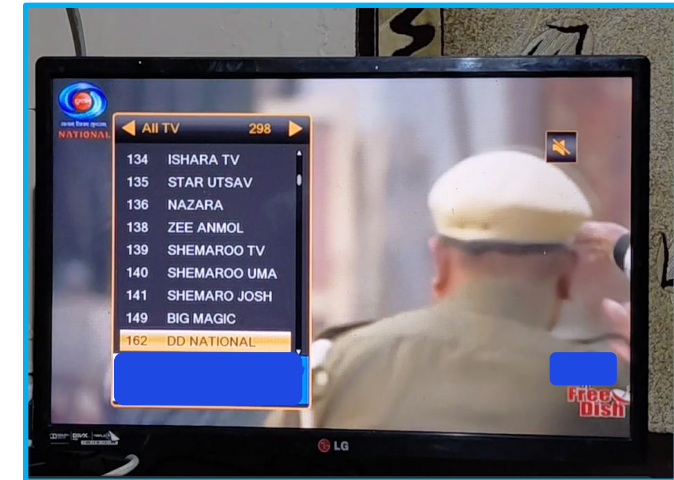
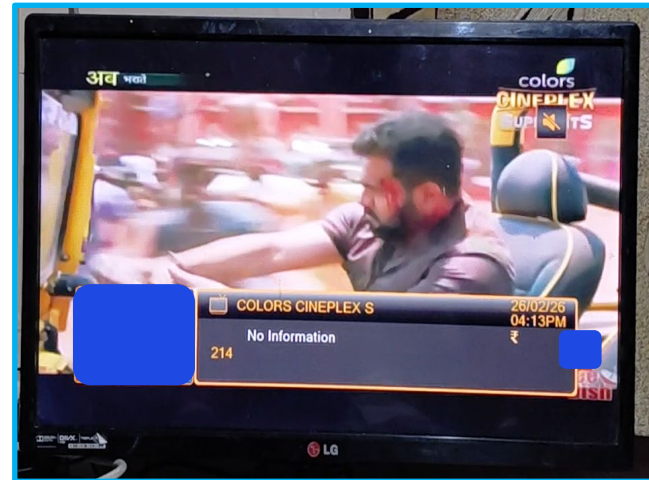
Our Approach & Methodology – Overview



CATV/HITS/DTH/IPTV DAS Headend Validation

Step 1: Detailed headend Walkthrough

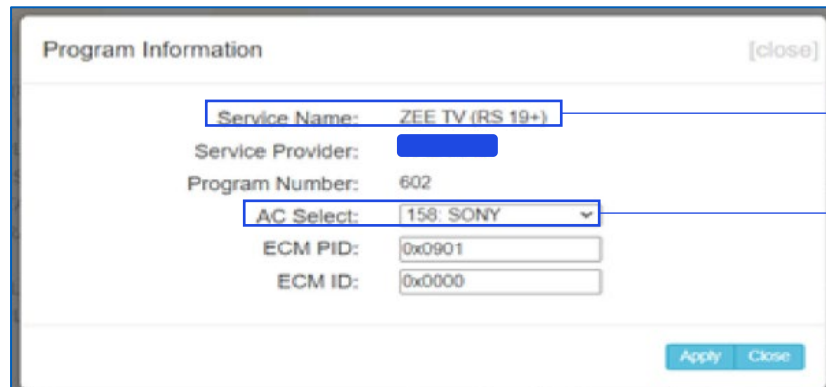
- Transmission of KU band Channels.



CATV/HITS/DTH/IPTV DAS Headend Validation

Step 1: Detailed headend Walkthrough

- Multiplexer/Scrambler/QAM Configuration validation.



Program Information [close]

Service Name: ZEE TV (RS 19+)

Service Provider: [redacted]

Program Number: 602

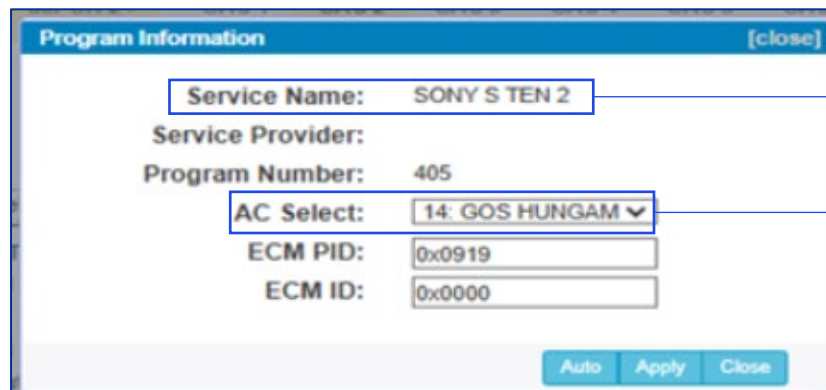
AC Select: 158: SONY

ECM PID: 0x0901

ECM ID: 0x0000

Apply Close

Attached Screenshot highlights
ZEE TV is getting Scrambled With
the Access Criteria of SONY TV



Program Information [close]

Service Name: SONY S TEN 2

Service Provider: [redacted]

Program Number: 405

AC Select: 14: GOS HUNGAM

ECM PID: 0x0919

ECM ID: 0x0000

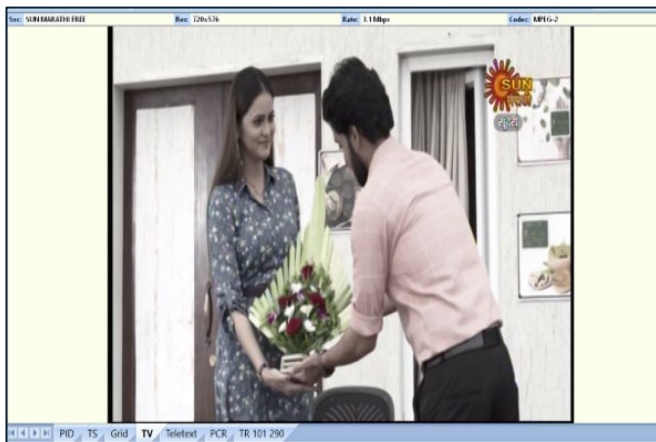
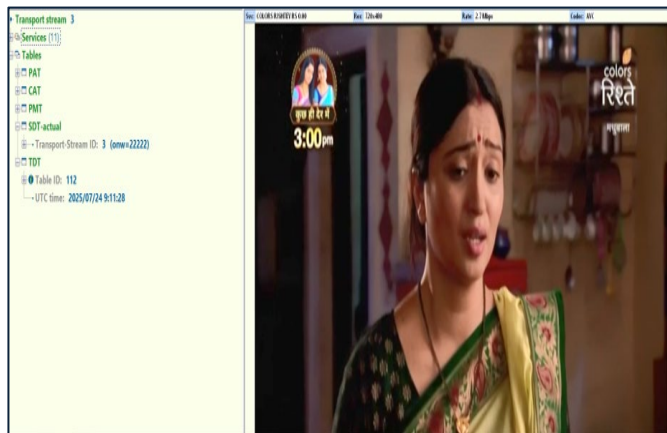
Auto Apply Close

Attached Screenshot highlights
SONY Ten 2 is getting Scrambled
With the Access Criteria of Hungama

CATV/HITS/DTH/IPTV DAS Headend Validation

Step 1: Detailed headend Walkthrough

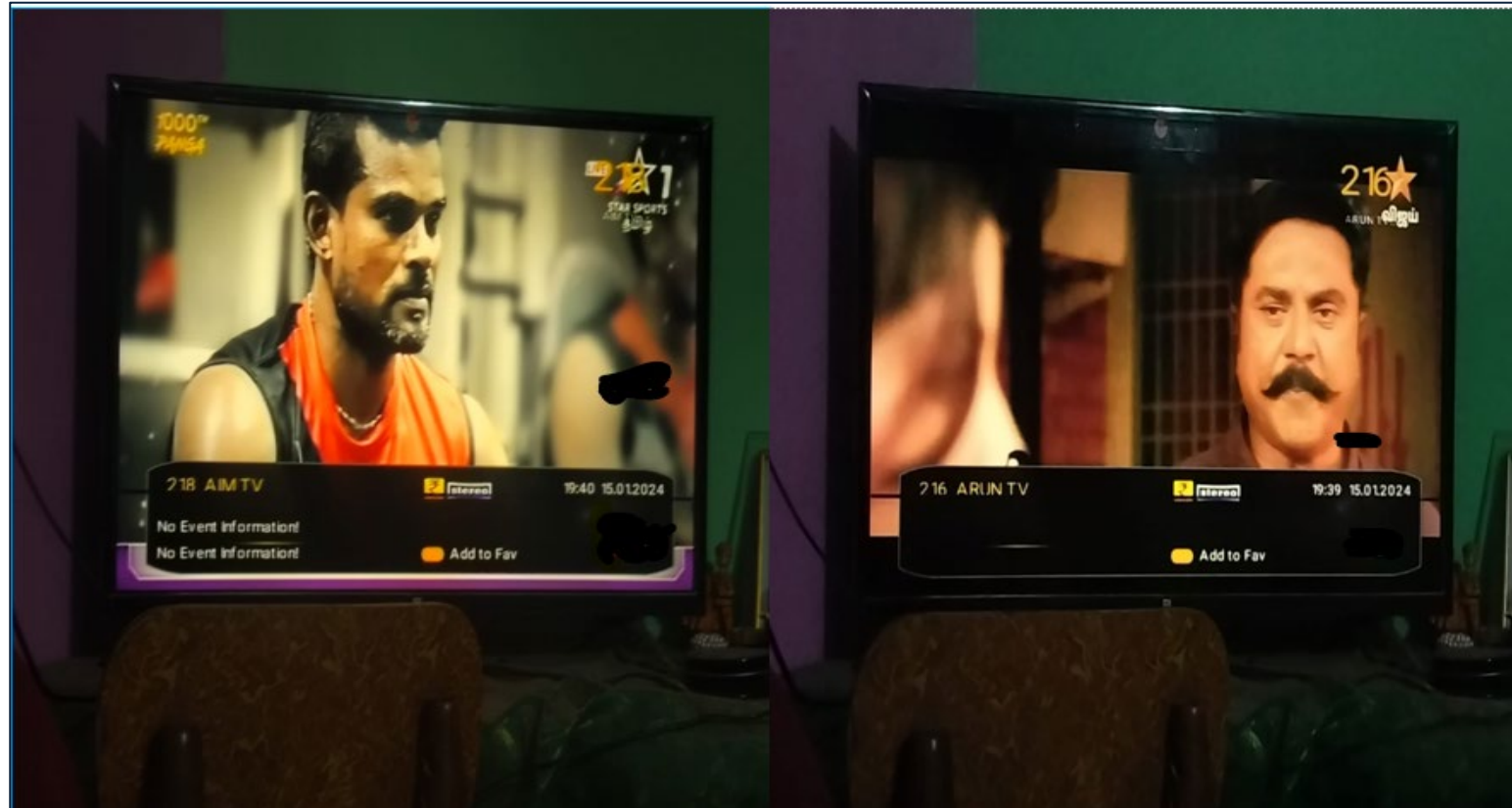
- Unscrambled transmission of Pay and FTA Channels.



CATV/HITS/DTH/IPTV DAS Headend Validation

Step 1: Detailed headend Walkthrough

- Pay Channels getting transmitted on FTA Channels.



CATV/HITS/DTH/IPTV DAS Headend Validation

Step1: Detailed headend Walkthrough

Validation of CAS and SMS Servers installed in DPO network (CAS Certificate dated 13-08-2025) during audit ground samples submitted by broadcaster were not found in the data shared by DPO.

Declaration from CAS Vendor

TO WHOMSOEVER IT MAY CONCERN

This is to certify that [REDACTED],
[REDACTED], having its DAS headend at [REDACTED],
[REDACTED], West Bengal – [REDACTED] has installed
Conditional Access System (CAS) from our company for its distribution network.

Date of CAS Installation: 27.02.2020

CAS Version: [REDACTED]

CAS ID: [REDACTED]

NETWORK ID: [REDACTED]

CAS PID detail: **0x03e8 (1000 in Decimal)**

Location of CAS servers : (Database server, ECMG, EMMG): [REDACTED],
[REDACTED], West Bengal – [REDACTED].

Detail of main and back up CAS servers installed: [REDACTED] Puducherry –
[REDACTED].

CATV/HITS/DTH/IPTV DAS Headend Validation

Step1: Detailed headend Walkthrough

Validation of CAS and SMS Servers installed in DPO network.

CAS Certificate submitted to Broadcaster in 15.1 audit dated (16-11-2024)

Declaration from CAS Vendor

TO WHOMSOEVER IT MAY CONCERN

This is to certify that [REDACTED] Pondicherry,
Installed DAS headend [REDACTED] Pondicherry, has installed
Conditional Access System (CAS) from our company for its distribution network.

Date of CAS Installation: 26.10.2016

CAS Version: [REDACTED]

CAS ID: [REDACTED]

NETWORK ID: [REDACTED]

CAS PID detail: 5001 [0X1389]

Location of CAS servers (Database server, ECMG, EMMG): [REDACTED],
[REDACTED] Pondicherry,

Detail of main and back up CAS servers installed: No: [REDACTED] Puducherry –
[REDACTED].

CATV/HITS/DTH/IPTV DAS Headend Validation

Step 1: Detailed headend Walkthrough

Validation of CAS and SMS Servers installed in DPO network.

CAS Certificate submitted to KPMG Team in 15.2 audit dated (23-03-2026) (Inconsistency was observed in the ground sample)

Declaration from CAS Vendor

TO WHOMSOEVER IT MAY CONCERN

This is to certify that [REDACTED] Pondicherry, having its DAS headend at : [REDACTED] Conditional Access System (CAS) from our company for its distribution network.

Date of CAS Installation: **10/08/2016**

CAS Version: **6.2.5**

CAS ID: [REDACTED]

NETWORK ID: [REDACTED]

CAS PID detail: 5001 (0x1389)

Remote: 49 (0x31)

Location of Main CAS servers (Database server, ECMG, EMMG): [REDACTED]
Pondicherry,

Detail of Main and back up CAS servers installed: Main CAS server along with Database.

Server date format: **DD/MM/YY**& time zone: **IST**

CATV/HITS/DTH/IPTV DAS Headend Validation

Data extraction

- Improper audit trail: Lack of logs for STB provisioning, package modifications, Channel Renaming

PNAME	PRODUCT_ID NAM	SERVICE_NAME	STATUS	STATUS_TIME	PRODUCT_TYI
Star Sports2 Hindi HD	228	Star Sports2 Hindi HD	Added	4/27/2022 14:48	ALACARTE
Star Sports2 Hindi HD	228	Star Sports2 Hindi HD	Removed	3/21/2025 7:31	ALACARTE
Star Sports2 Hindi HD	228	Star Sports2 Hindi HD	Added	3/21/2025 7:31	ALACARTE

Star Sports 2 Hindi HD was launched on March 15, 2025. However, the image above indicates that changes implemented on March 21, 2025, are also being reflected in historical records

- Data Integrity and Accuracy Issues

Total Active VC Count: 11232

Create Time:2025-07-29 16:14:47
Report Time:2025-07-29 16:14:48
Query Deadline:2025-07-07 23:59:59

Total Active VC Count: 17963

Create Time:2025-07-30 17:48:13
Report Time:2025-07-30 17:48:13
Query Deadline:2025-07-07 23:59:59

Snapshot 1 highlights data extracted on 29th July 2025 for total active subscribers on 7th July 2025 which is 11,232.

On 30th July 2025 same data was extracted From the same system for the same date, However additional 6,731 subscriber were Available in the report.

CATV/HITS/DTH/IPTV DAS Headend Validation

Suggestions for inclusion in the TRAI DAS audit manual for CATV

- Vendors to disclose total instance of CAS and SMS Servers installed in MSO network independently.
- All the CAS and SMS servers should be installed in the headend Premises disclosed to broadcaster.
- Details of all users having access to SMS and CAS databases and user privileges i.e., read, write and delete.
- Database audit trail from SMS and CAS database.
- Mandatory backup from SMS and CAS servers on daily basis or concurrently for avoiding data loss in case of database crash, hardware failure and Cybersecurity incidents.

CATV/HITS/DTH/IPTV DAS Headend Validation

Issues Observed during IPTV Audits.

- 1. Unavailability of Audit Manual.**
- 2. Definition of Forensic Watermarking.**
- 3. DRM & SMS Reporting Structure.**

- Table (D). DRM Requirements for conditional access by subscribers and encryption for IPTV services:
 - a. Point D.7(p) requires generation of “List of blacklisted STBs/unique consumer subscription in the DRM” from DRM. Currently, this is mentioned as a desirable feature and not a mandatory requirement.
 - b. point No D. 7 (q) requires generation of “Channel and bouquet wise monthly subscription report in the prescribed format” from DRM. However, the same requirement exists for SMS under point No C. 10 (f).
 - c. D. 7 (u) requires generation of “The ageing report for subscription of a particular channel or bouquet” from DRM. However, the same requirement exists for SMS under point No C. 10 (j).

Thank You

