



WALESI

The Future is Brighter



History of Walesi

- ❖ Walesi is the State-Owned Commercial Enterprise providing quality, free-to-air digital television to the people of Fiji.
- ❖ It was founded on 2 April 2015 by the Fijian Government. This was the Fijian Government initiative to provide access to digital television to every household in Fiji.
- ❖ Walesi Digital Television Platform trial began on 1 August 2016, for the viewers in the Suva-Nausori Corridor, in the Central division of Fiji, who were the first in Fiji to experience Free to Air Digital Television.
- ❖ Walesi was officially launched on 20th December 2017.

Walesi Offices



- ❖ Walesi has four (4) regional offices in Suva, Lautoka, Nadi and Labasa
- ❖ The Head Office of Walesi PTE Limited is based at 8 Adi Davila Road, Domain, Suva.

Walesi Services

- ❖ Walesi Set Top Box (DTT)
- ❖ Walesi Satellite Television - Remote/Maritime Islands/Hotels/Resorts (DTH)
- ❖ Walesi Mobile App - Smartphones/Tablets (OTT)
- ❖ digitalFIJI Free Wi-Fi - Hotspot in Markets Fiji Wide
- ❖ VSAT - Internet for schools and communities

Channels on Walesi

1. FBCTV
2. Fiji One
3. FBC Sports HD
4. MaiTV
5. Na Lololo
6. FBC2
7. Parliament Channel
8. Hope Channel
9. Education Channel

Provision for Adhoc Channels such as PPV, Election Channel (2022)

Digital vs Analog

- Walesi is providing 100% coverage in Fiji compared to 60-65% coverage for Analog
- Walesi offers better picture and sound quality over Analog
- Walesi Set Top Box (STB) offers multiple channels on one connection (HDMI or AV) to the TV sets
- Program information (Electronic Program Guide) on STBs
- Program record and play later at own convenience on STBs

Picture Quality

Walesi



Analog



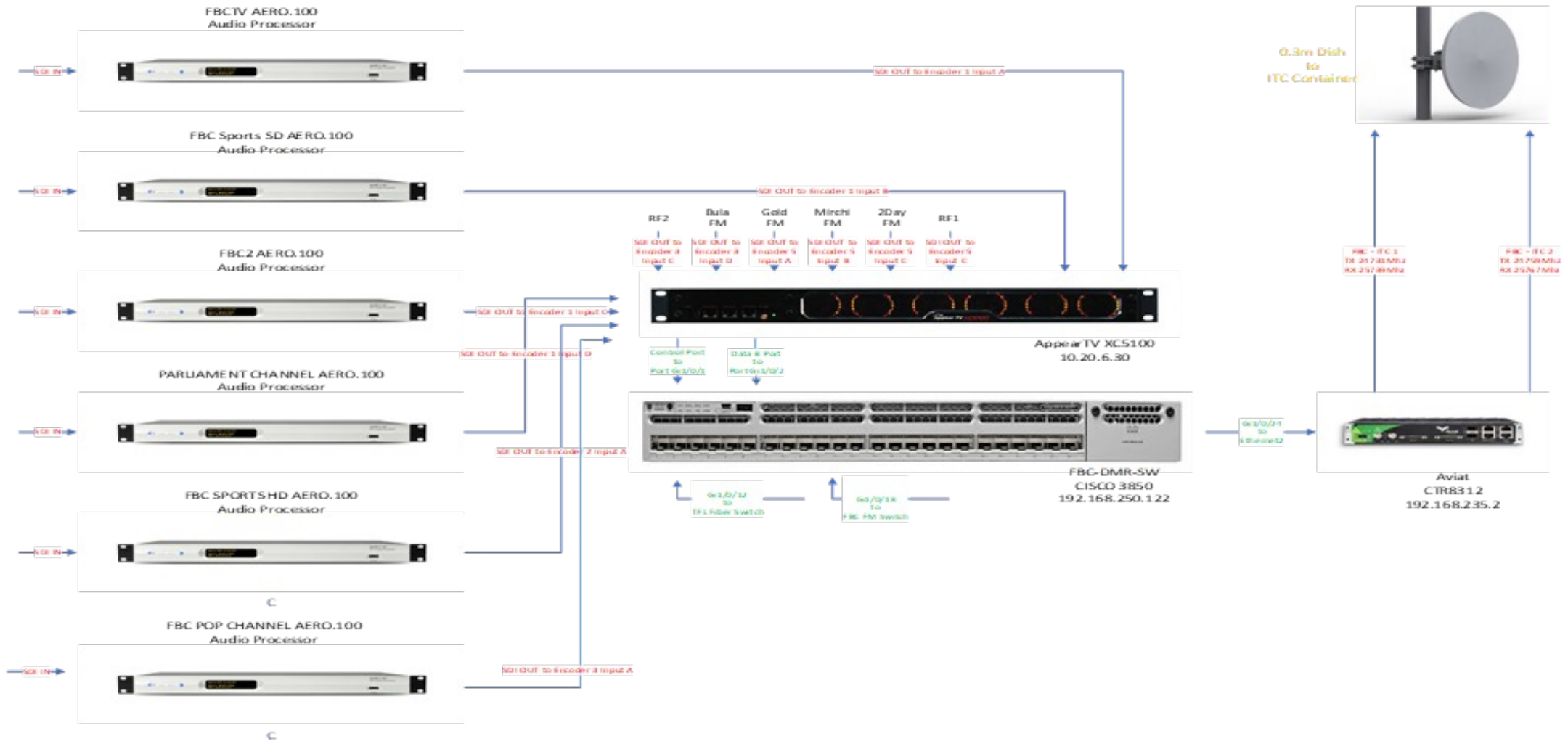
Satellite Services

- Eutelsat 172B
- Coverage extends to Oceania, part of Asia and part of North America. Potential unlinking services to these regions
- Robust C-band
- VSAT – internet over satellite (commercial clients)
- Remote transmitter sites monitoring
- CAM (Conditional Access Modules) solution for Hotels/Resorts

OTT

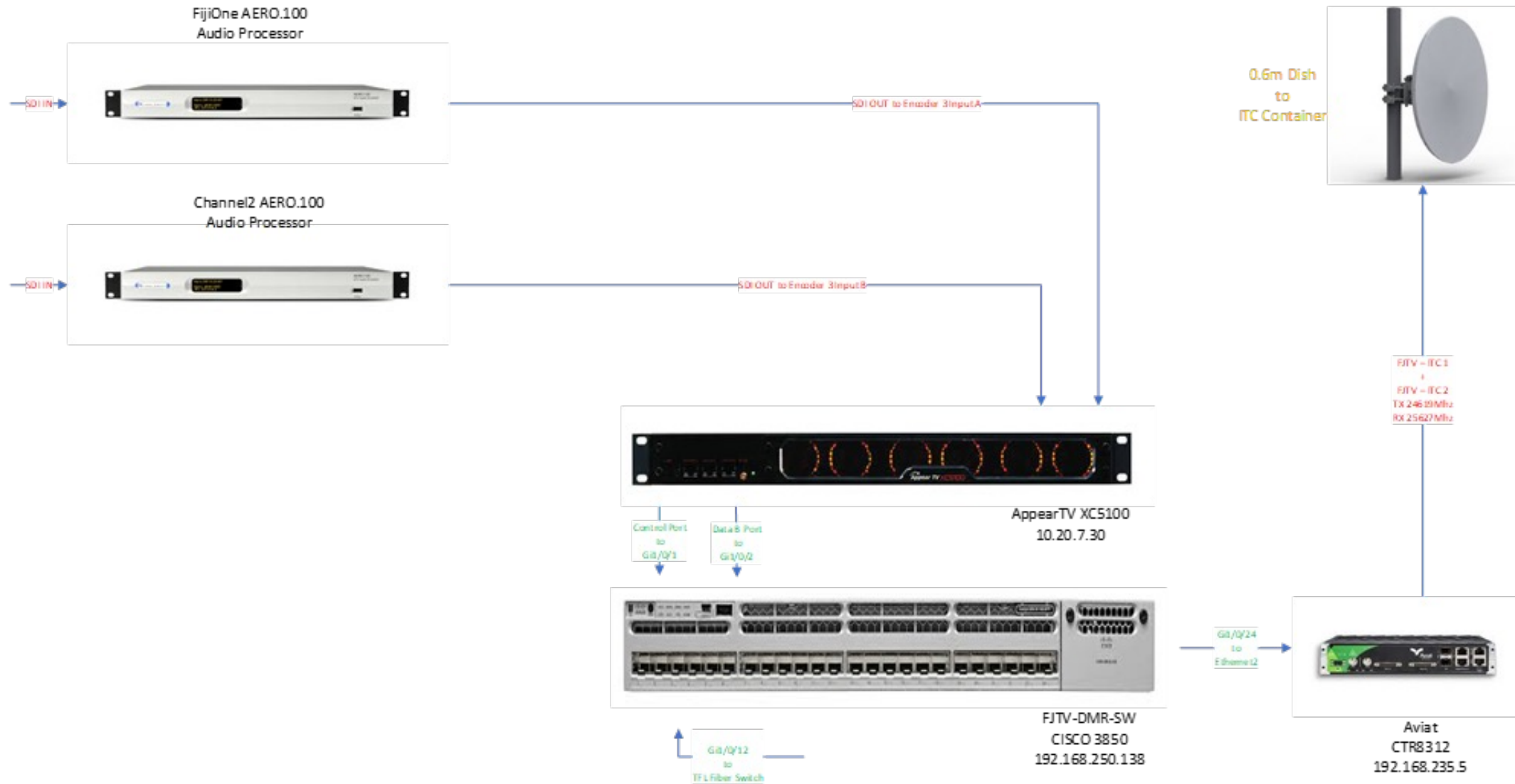
1. The current way to go for most broadcasters/content providers
2. Content can be Geo-blocked/enabled
3. Video On Demand service opportunities
4. Third party (ISP) is involved – revenue share model
5. Marketplace/advertisements
6. Options for interactive features
7. Other emergency/medical/general services can be integrated

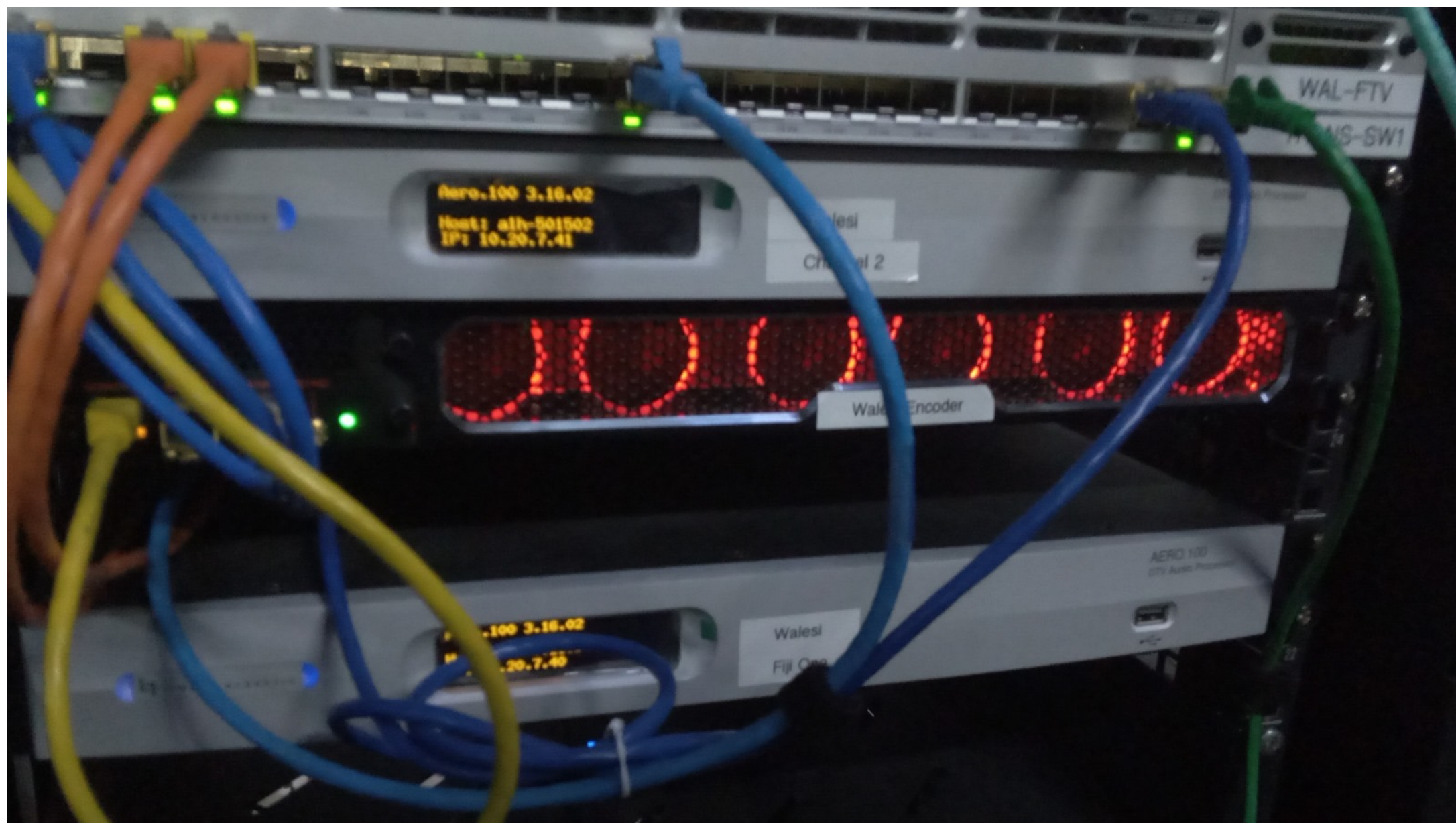
FBC BROADCASTER SETUP



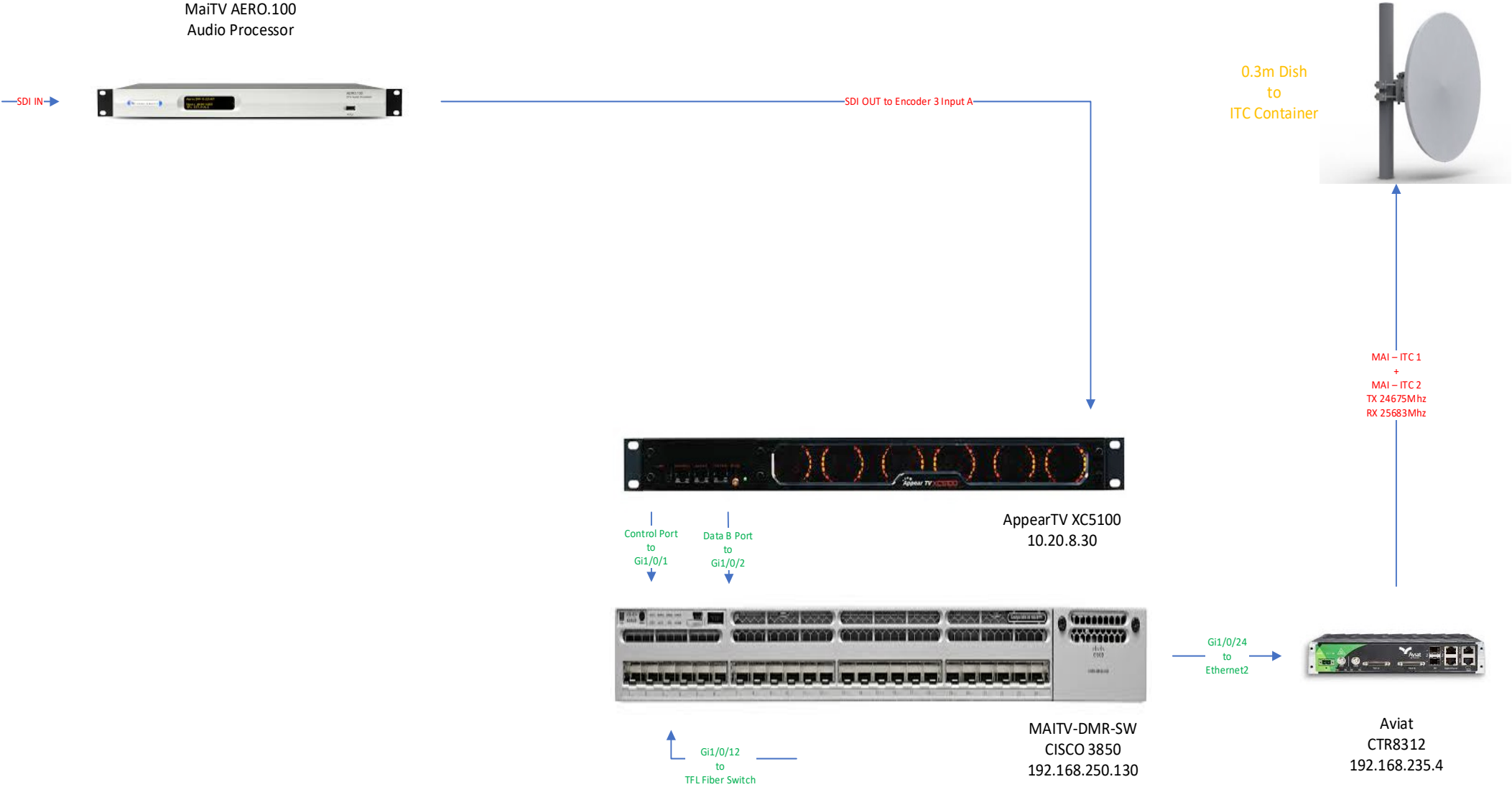


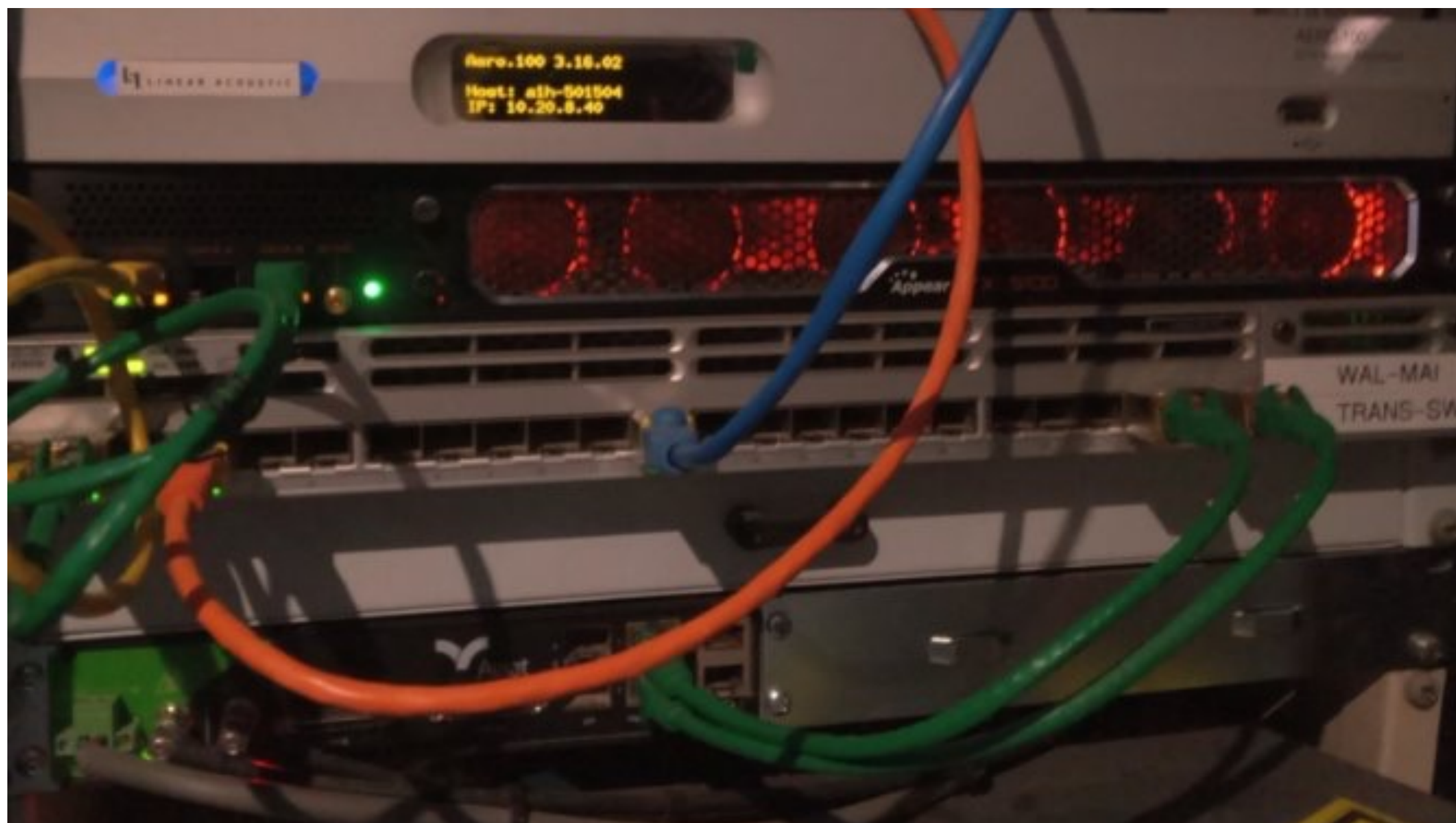
FIJITV BROADCASTER SETUP





MAITV BROADCASTER SETUP





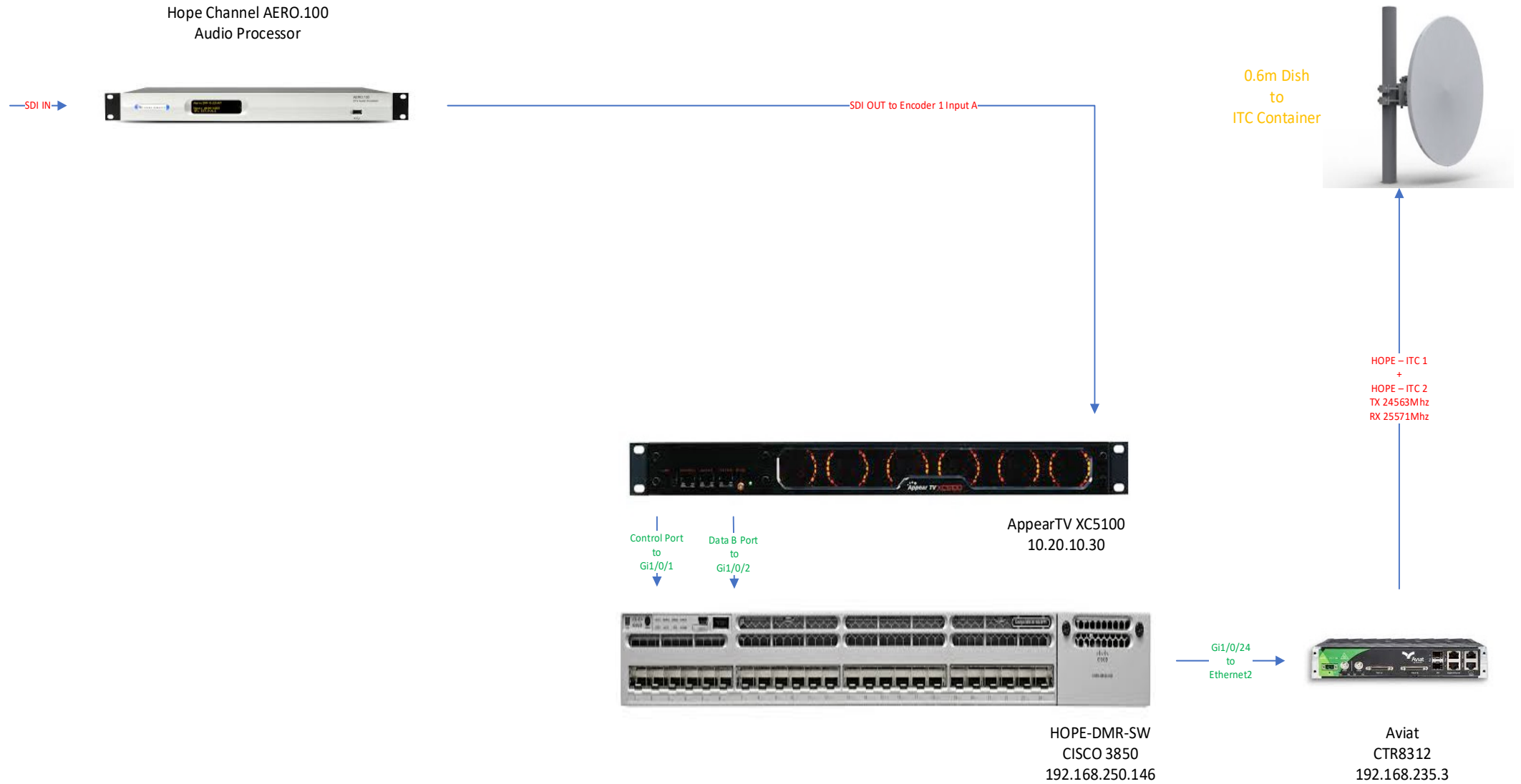
Auto.100 3.16.02

Host: alh-501504
IP: 10.20.8.40

100

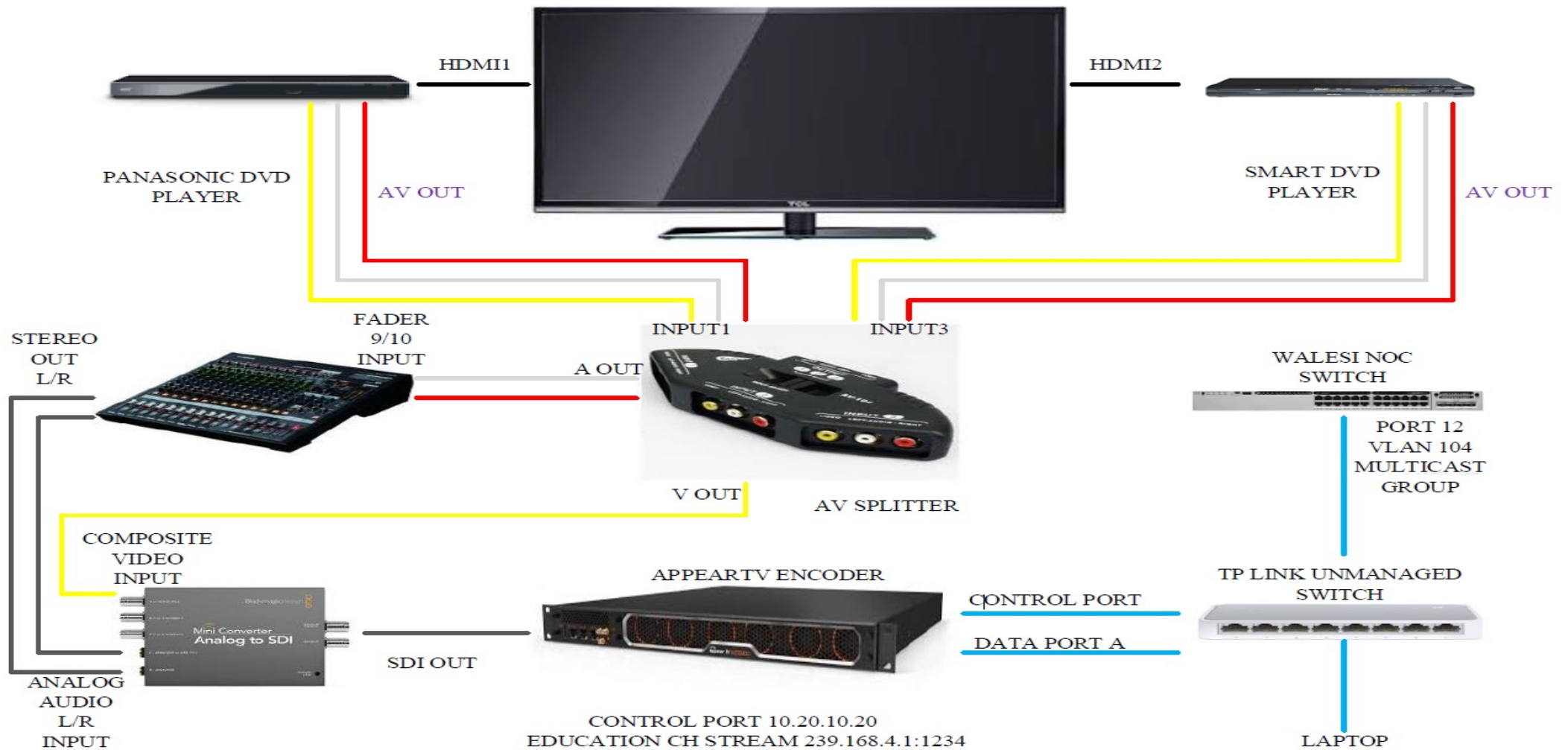
WAL-MAI
TRANS-SW

HOPE BROADCASTER SETUP

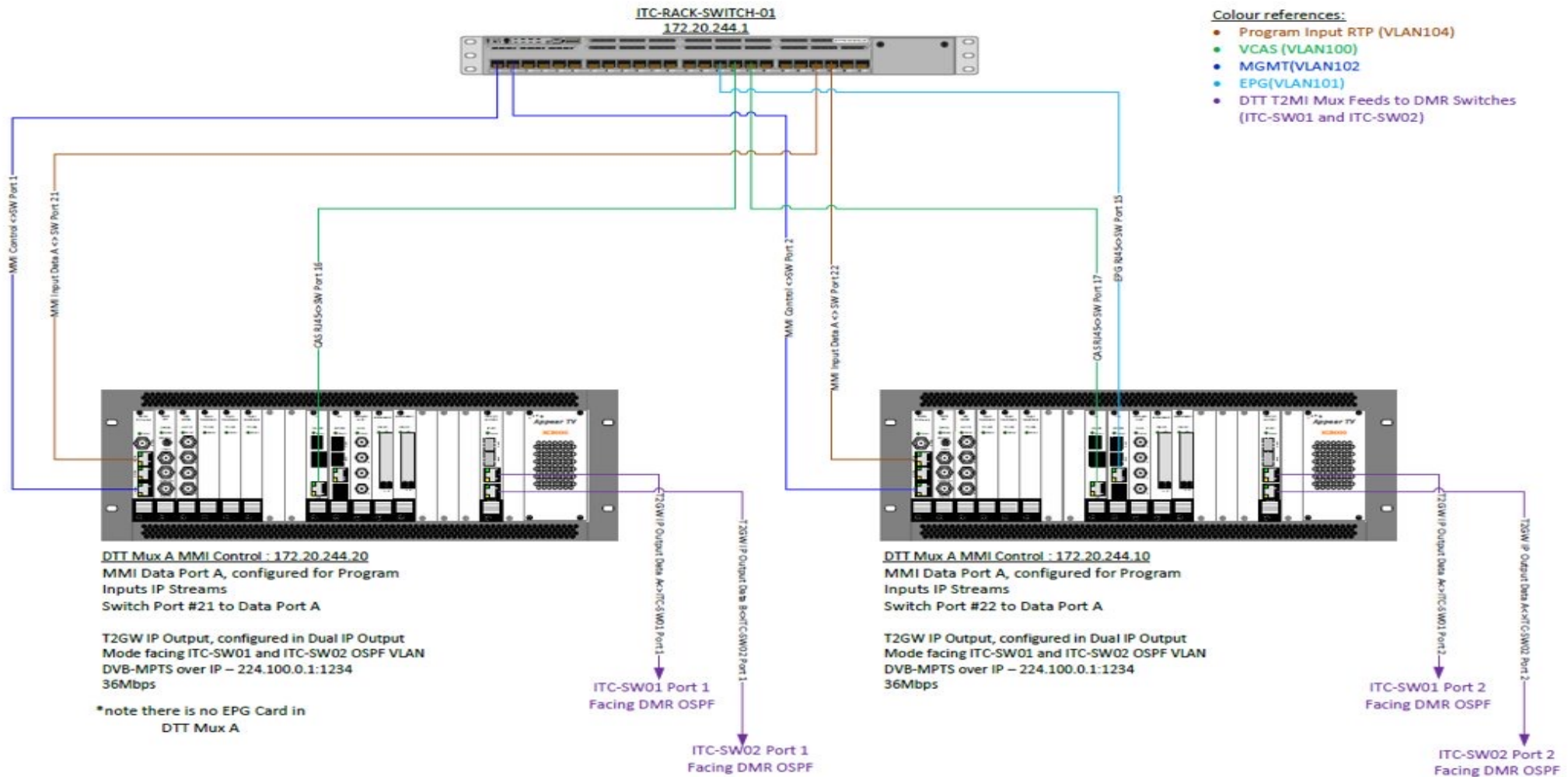




Education Channel Playout



DTT Mux A and B Network Diagram

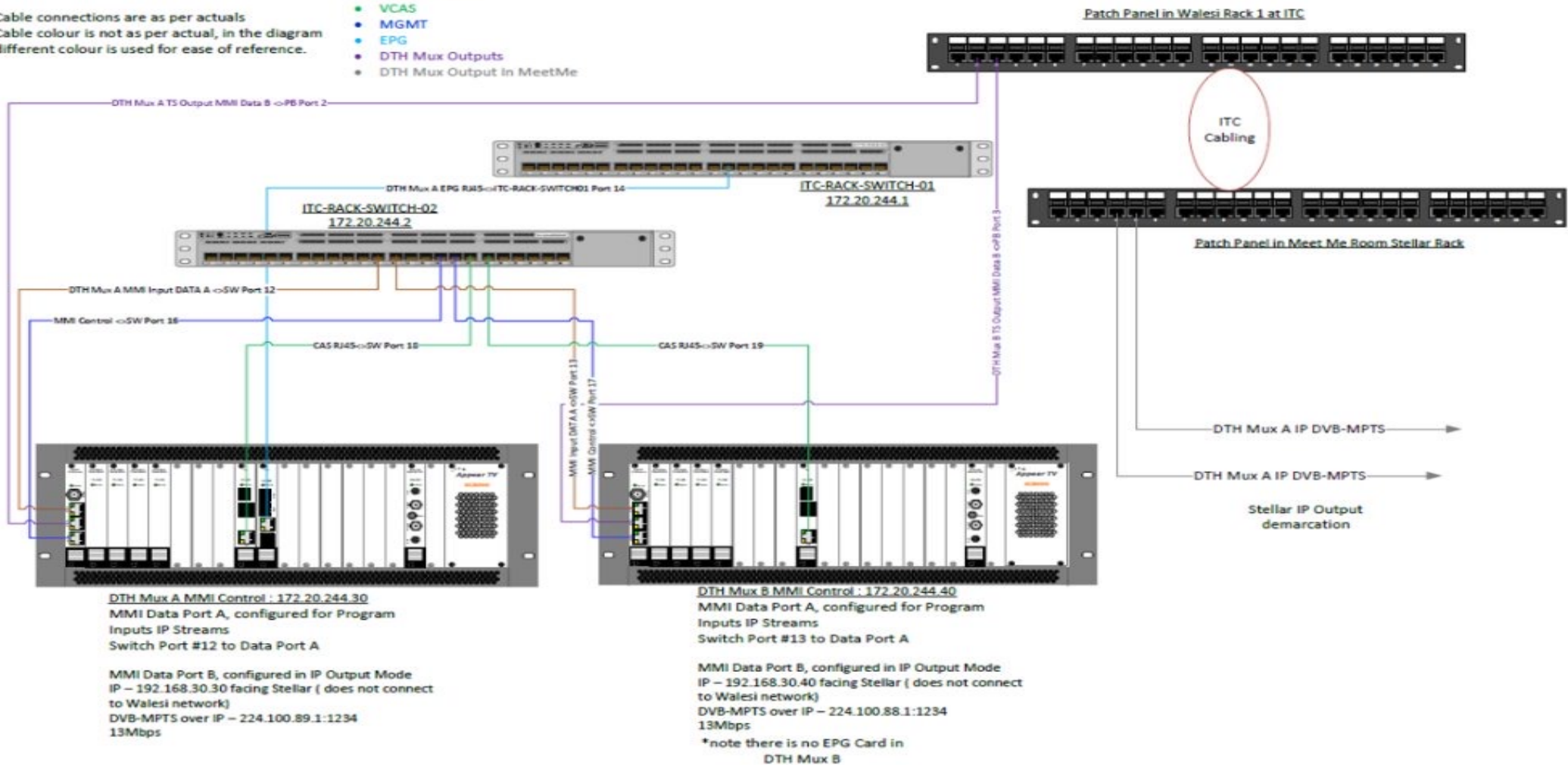


DTH Mux A and B Network Diagram

- Cable connections are as per actuals
- Cable colour is not as per actual, in the diagram different colour is used for ease of reference.

Colour references:

- Program Inputs
- VCAS
- MGMT
- EPG
- DTH Mux Outputs
- DTH Mux Output in MeetMe

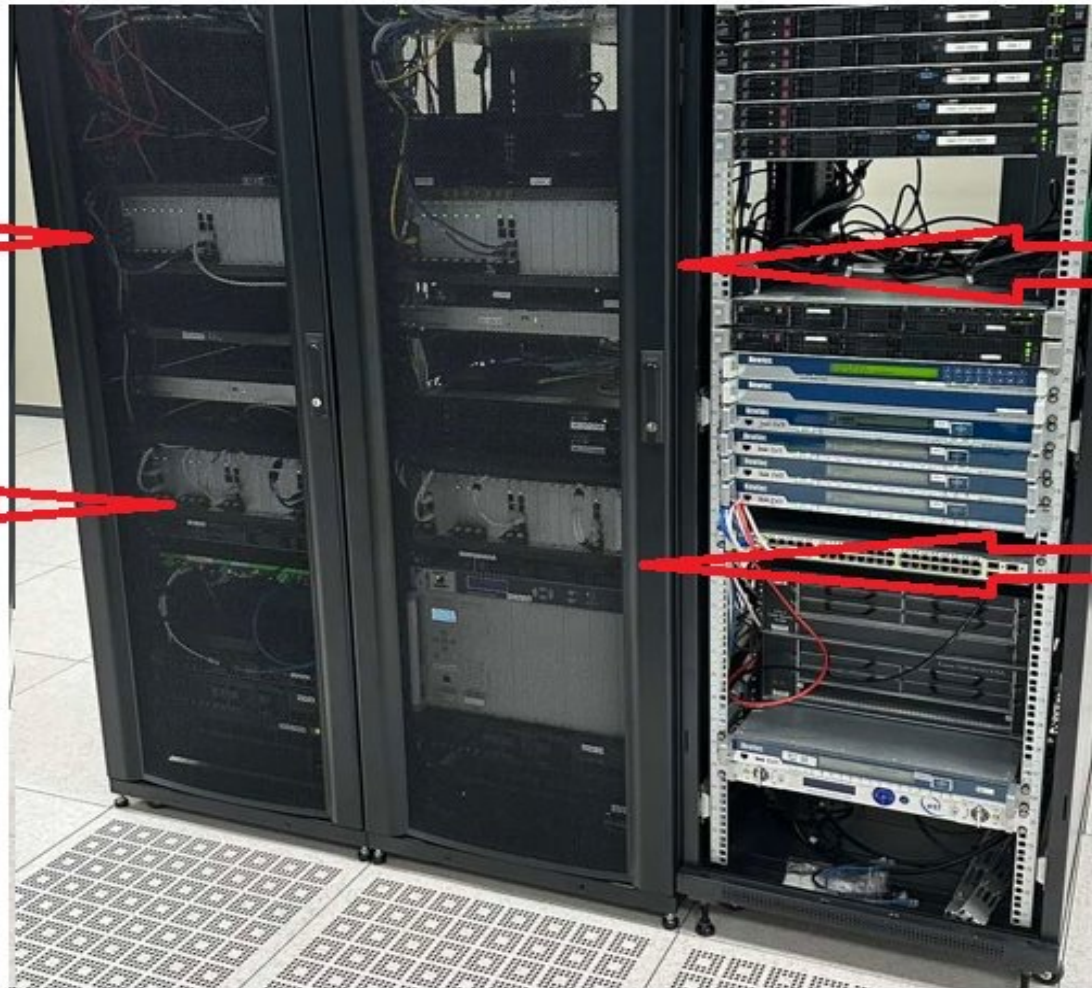


DTH MUX A

DTT MUX A

DTH MUX B

DTT MUX B

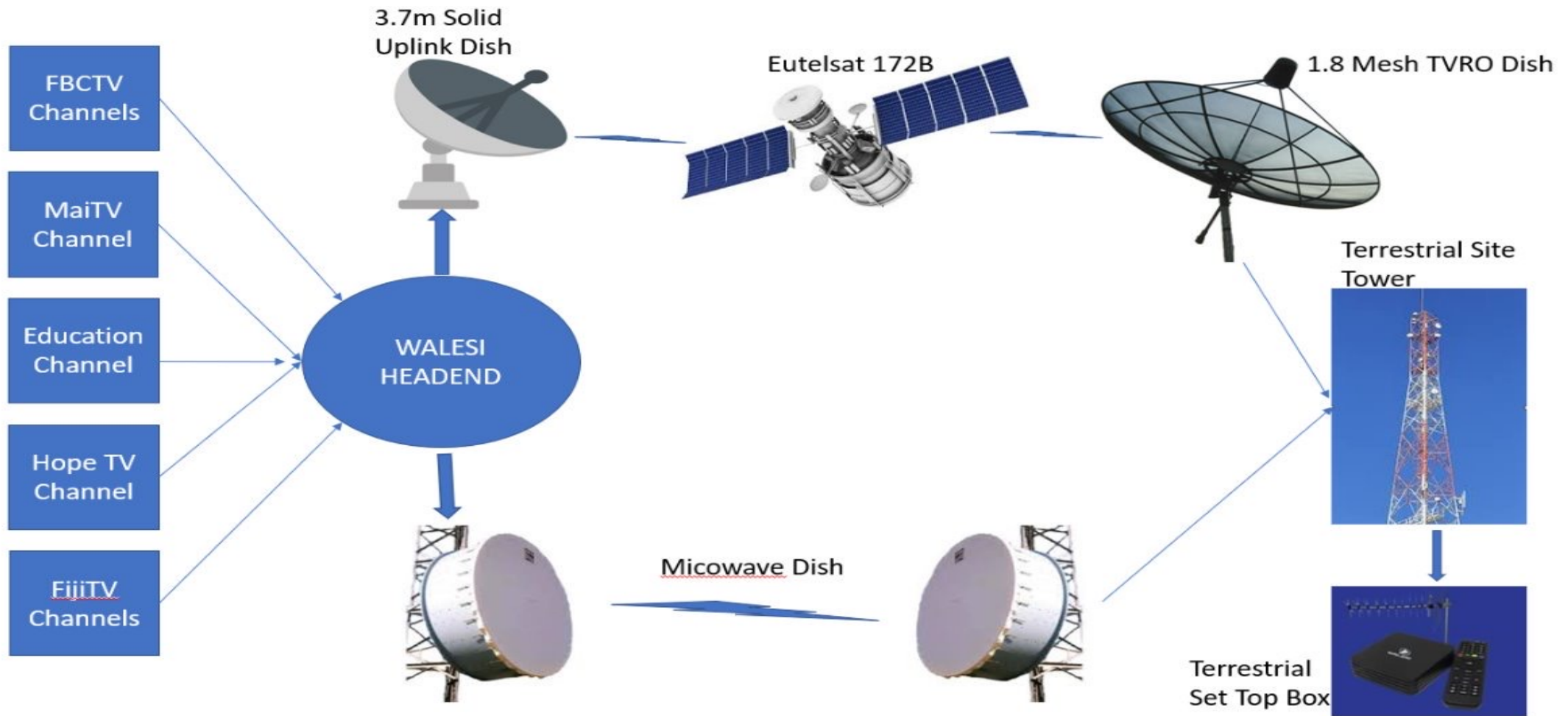


Terrestrial System Details

#	Site-Name	Island	Longitude	Latitude	Channel	Freq (Mhz)	Site Altitude (m)	Tower Height (m)	Antenna Type	Transmit Power (Watt)	Connectivity
1	Nakobalevu	Viti Levu	178°25'00.9"E	18°03'41.6"S	25	506	451m	45m	8UD	600W	TSoIP/ASI
2	Naboro	Viti Levu	178°18'10.2"E	18°08'30.2"S	32	562	45m	45m	4 Stack	5W	Nakobalevu Off-Air
3	Taunovo	Viti Levu	178°03'17.8"E	18°15'11.8"S	27	522	37m	35m	4 Stack	100W	TSoIP/ASI
4	Dogowale	Viti Levu	177°54'12.1"E	18°15'31.1"S	29	538	201m	60m	Panel x2	100W	TSoIP/ASI
5	Bucona	Viti Levu	177°38'40.0"E	18°11'48.3"S	27	522	9m	35m	Panel x2	100W	ASI
6	Gusunataga	Viti Levu	177°28'59.7"E	18°09'31.9"S	29	538	65m	45m	8UD	600W	TSoIP/ASI
7	Kavukavu	Viti Levu	177°17'52.0"E	17°58'09.3"S	28	530	270m	45m	4UD	100W	TSoIP/ASI
8	Sabeto	Viti Levu	177°27'51.0"E	17°41'59.7"S	27	522	457m	45m	8UD	600W	TSoIP/ASI
9	Lololo	Viti Levu	177°36'08.9"E	17°31'49.4"S	26	514	469m	45m	8UD	600W	TSoIP/ASI
10	Koro'O	Viti Levu	177°56'2.67"E	17°34'29.82"S	25	506	1020m	50m	8UD	600W	TSoIP/ASI
11	Monasavu	Viti Levu	178°04'19.6"E	17°45'13.0"S	30	546	1068m	45m	4 Stack	100W	TSoIP/ASI
12	Tuidreke	Viti Levu	178°01'34.7"E	17°22'46.6"S	29	538	233m	45m	4 Stack	100W	TSoIP/ASI
13	Rakiraki	Viti Levu	178°11'11.1"E	17°22'03.5"S	30	546	350m	45m	8UD	600W	TSoIP/ASI
14	Mataiwailevu	Viti Levu	178°15'20.2"E	17°30'44.2"S	29	538	188m	45m	4 Stack	100W	TSoIP/ASI
15	Nayala	Viti Levu	178°24'41.64"E	17°46'45.14"S	26	514	233m	35m	4 Stack	100W	ASI
16	Naveria	Vanua Levu	179°19'30.0"E	16°47'28.0"S	26	514	200m	35m	4UD	600W	TSoIP/ASI
17	Delaikoro	Vanua Levu	179°19'00.9"E	16°35'22.7"S	30	546	906m	50m	8UD	600W	TSoIP/ASI
18	Vitadra	Vanua Levu	179°24'47.0"E	16°25'57.1"S	24	498	85m	35m	4 Stack	100W	Delaikoro Off-Air
19	Mataniwai	Vanua Levu	179°26'15.0"E	16°20'35.0"S	29	538	76m	35m	Panel x2	100W	ASI
20	Uluivuya	Vanua Levu	178°43'03.7"E	16°58'24.7"S	28	530	517m	45m	4 Stack	100W	ASI
21	Des Voeux Peak	Taveuni	179°57'51.8"W	16°50'27.0"S	30	546	1156m	50m	4UD	100W	ASI
22	Levuka	Ovalau	178°50'02.9"E	17°40'58.6"S	30	546	7m	10m	4 Stack	100W	ASI
23	Lakeba	Lakeba	178°47'20.1"W	18°12'33.9"S	26	514	205m	35m	Panel x2	100W	ASI
24	Vunisea	Kaduva	178°09'49.33"E	19°03'11.58"S	30	546	103m	25m	4 Stack	100W	ASI
25	Muani	Kaduva	178°10'03.4"E	19°07'57.8"S	24	498	307m	45m	Panel x2	100W	ASI
26	Rotuma	Rotuma	177°04'21.5"E	12°30'01.3"S	25	506	224m	35m	4 Stack	100W	ASI

TSolP and ASI Connectivity Diagram

Terrestrial Platform



Home

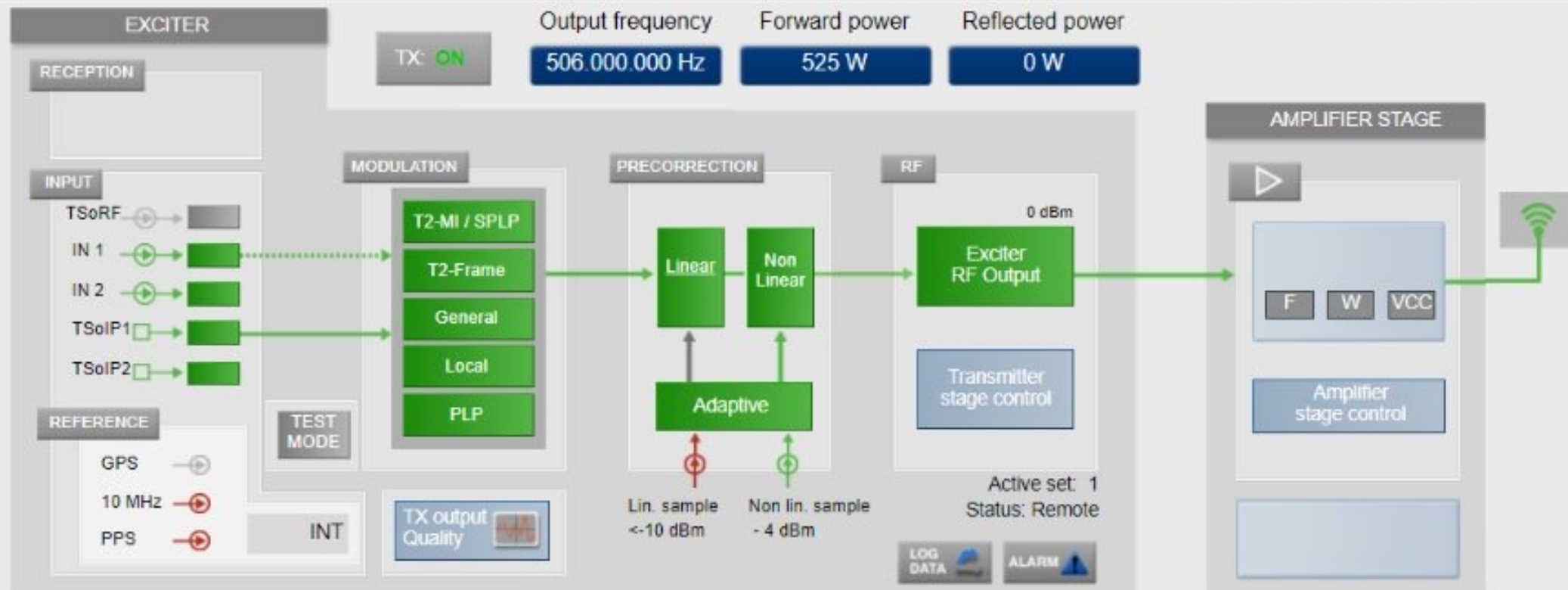
System

Users

Close session

TE9000E6 [NAKOBALVU_TX1_CH25]

Egatel

COMSA
CORPORATION

Inputs

Input TS A	ASI 1	▼
Input TS B	TSolP1	▼
TS Commutation	AUTO	▼
TS Priority	TS B	▼

Transmitter Stage Control

ON/OFF Transmitter	ON	▼
Transmitter Nominal Power (W)	600	
VREF Transmitter(Volts) (525 W)	3.45	
	Up	Down

RF Output

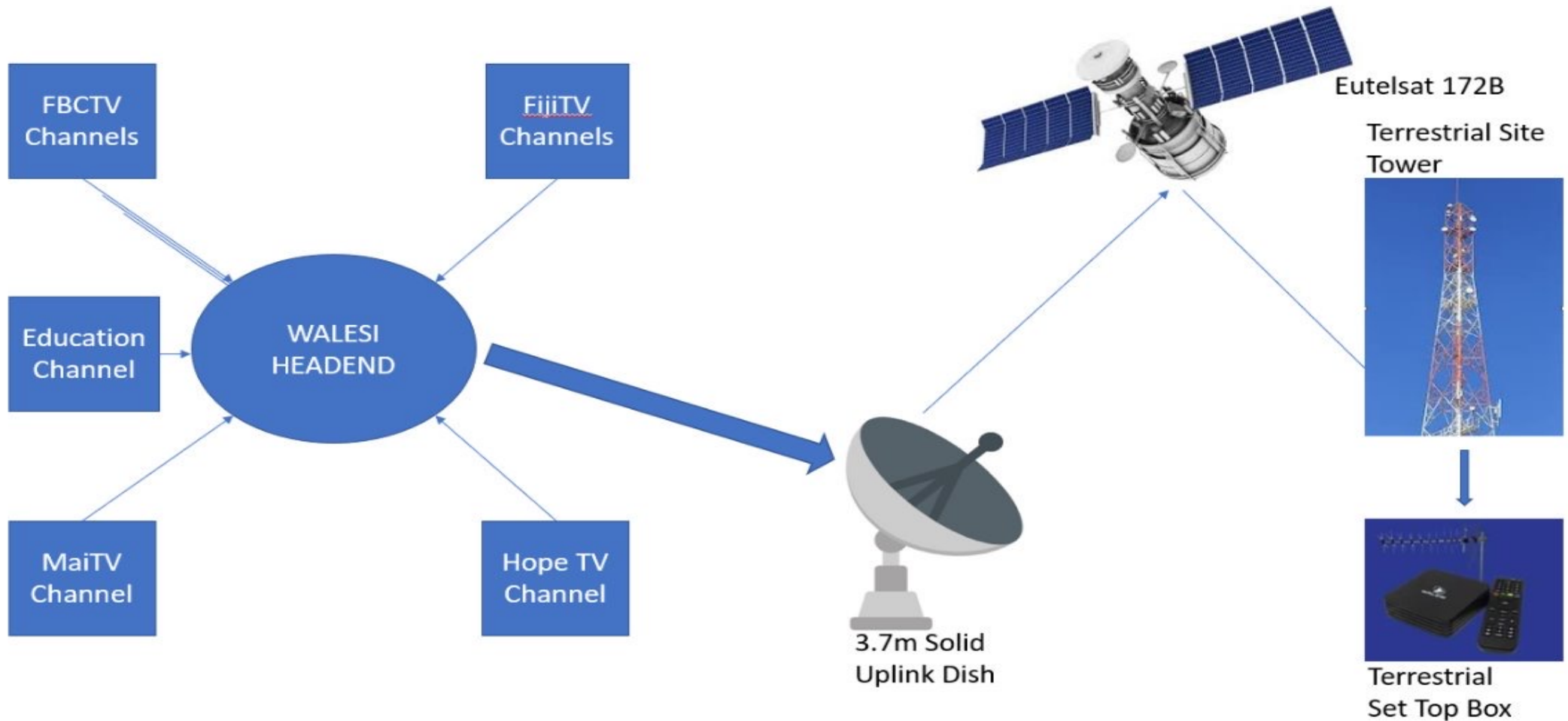
Output Frequency (Hz)	506.000.000
Pout Exciter Attenuation (dB)	16.5
Bandwidth	8 MHz ▼

Measures

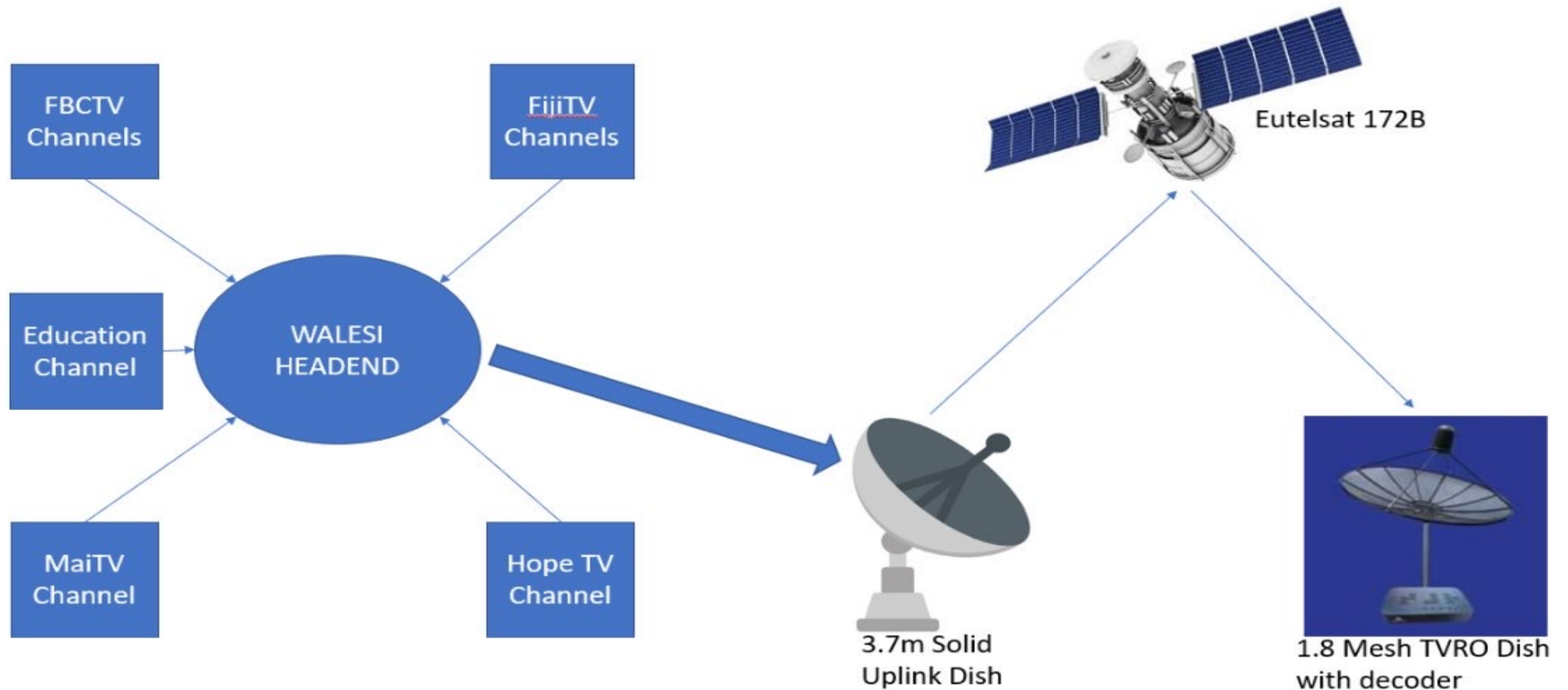
Exciter output Power (dBm)	0
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ASI Connectivity Diagram

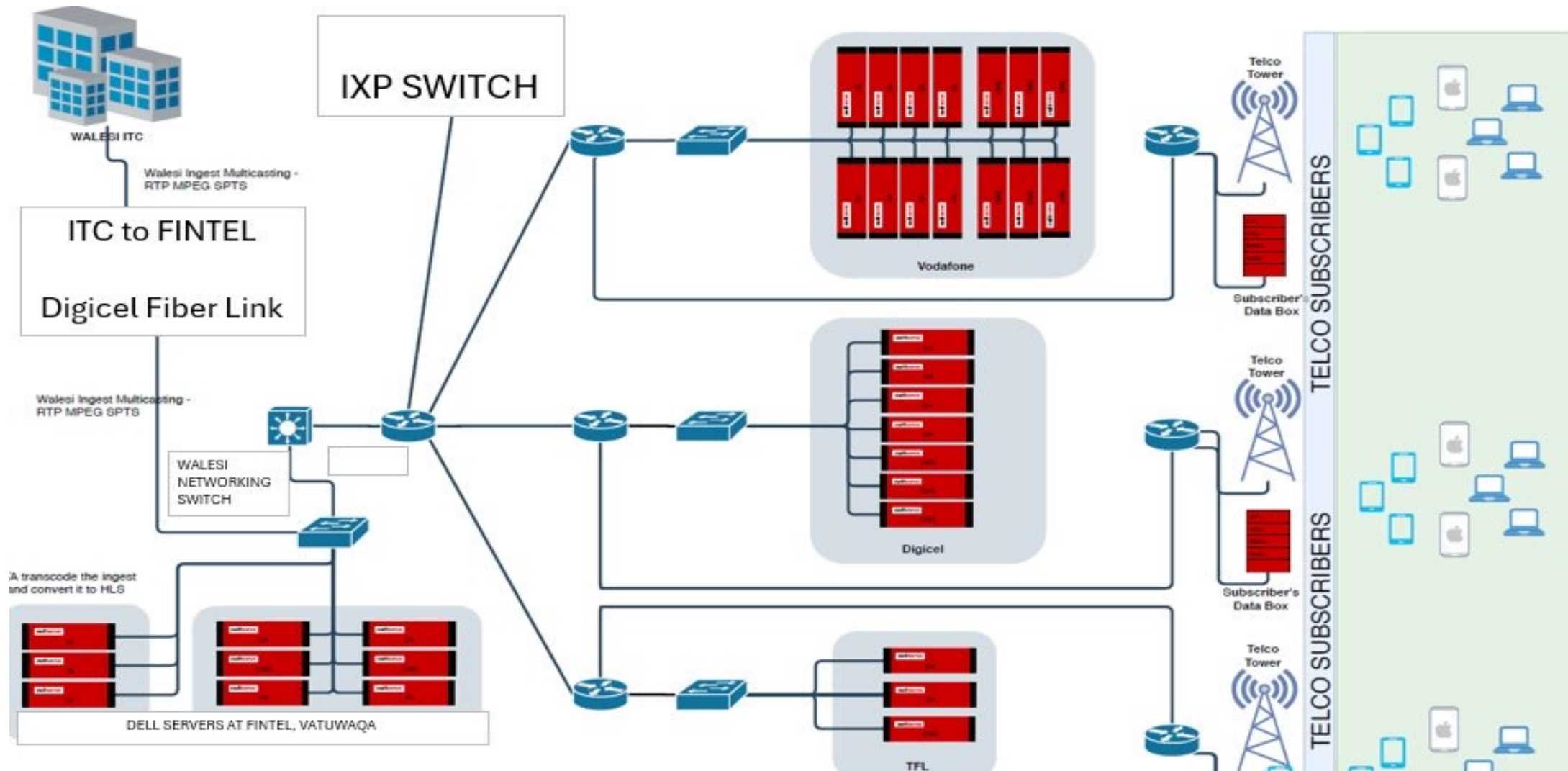
Terrestrial Platform



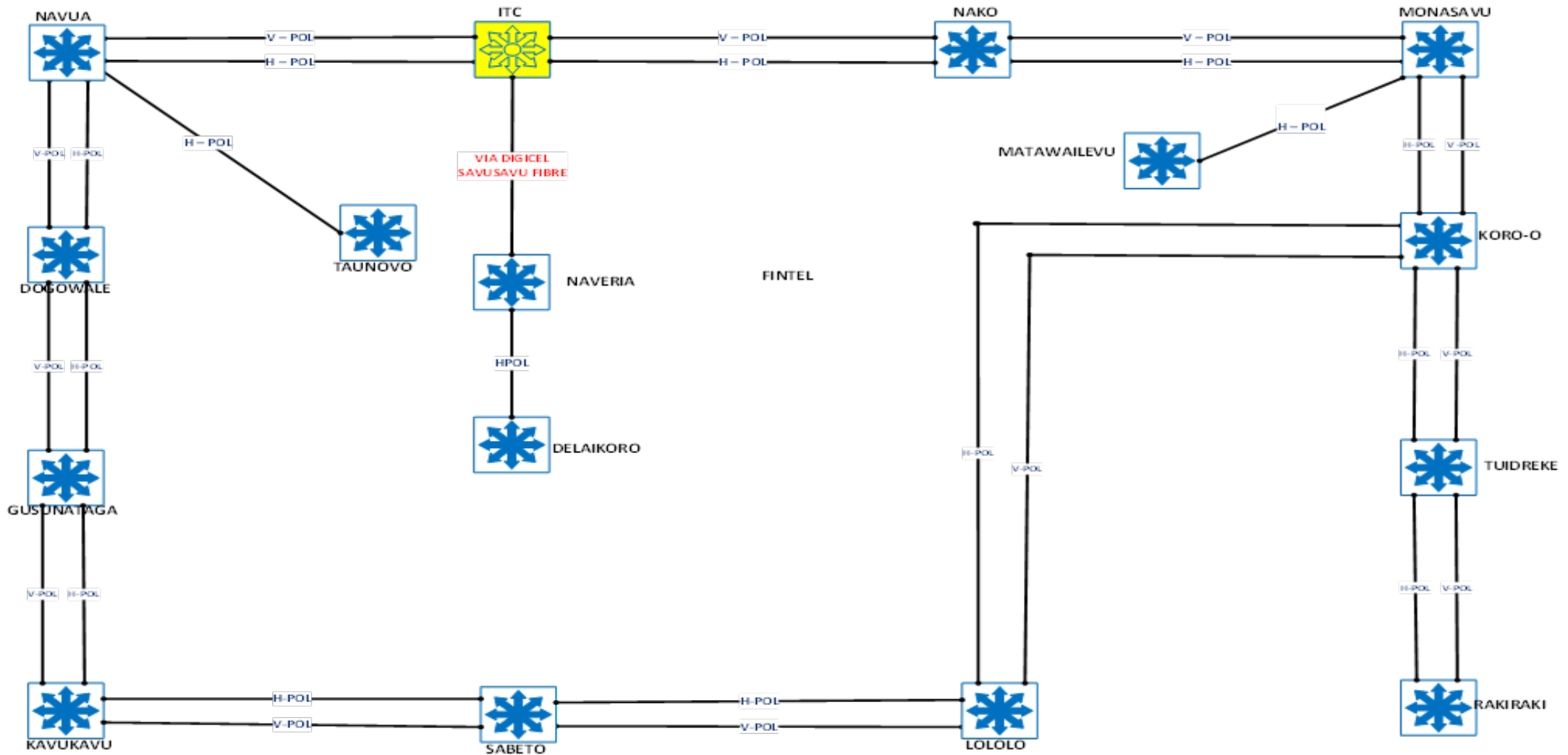
ASI Connectivity Diagram Satellite Platform



Walesi APP Network Diagram



DMR Network Diagram



Tower Construction

ITC



Gusunataga



Sabeto



Matawailevu



Rotuma



Digital Screens Construction



Networking

- In-house Network Engineer
- Member of APNIC
- Connectivity on IXP Switch at Fintel
- Firewall – FortiGate 100F (Main and Slave)
- Cisco Switches 3850 (Replacing them with 9200/9300 Series)
- Setup Boxes are activated via license keys from Subscriber Management Server
- OTT Users are activated via the IP Blocks provided by ISPs

Network Risks

Service Downtime (Outages)

Cause: Hardware failure, software bugs, or network congestion.

Impact: Disruption of live broadcasts or on-demand services, leading to customer dissatisfaction and loss of revenue.

Example: A server crash during a major sports event can cause mass user drop-offs.

Cyber Attacks (e.g., DDoS, Hacking)

Cause: Malicious actors targeting the network to overload or breach it.

Impact: Service disruption, data theft (customer info, content), and potential legal issues.

Example: A DDoS attack that overwhelms the streaming servers.

Signal Interference or Degradation

Cause: Issues in satellite links, terrestrial transmission, or bad network routing.

Impact: Poor video/audio quality, buffering, or blackouts.

Example: Interference from nearby electronic equipment disrupting digital TV signals.

Insider Threats or Misconfiguration

Cause: Human error, poorly configured firewalls/routers, or disgruntled employees.

Impact: Unintentional downtime or intentional sabotage, leading to service vulnerability.

Example: An engineer accidentally disables access to a core content delivery server

Opportunities

1. Extend satellite-based services to remote areas in Pacific nations where access is limited.
2. Offer consulting, network operation center (NOC) and DTV support to Pacific nations developing or upgrading their broadcast systems.
3. Provide educational channels and public service broadcasting (e.g., disaster awareness, health, agriculture, and civic education) in partnership with Governments or NGO
4. Form a regional DTV alliance with broadcasters from Pacific Island nations to collaborate on content sharing, standards, and joint investments.

END

