ARASU CABLE TV CORPORATION LAUNCHES CATV SERVICES IN TAMIL NADU

BY G.C. JAIN (CMD) MCBS PVT LTD

MCBS Has Played An Enabling Role In Setting Up ARASU’s CATV Infrastructure & This Month’s Technical Article Provides An Overview Of ARASU’s Plans To Set Up State-Of-The-Art CATV Distribution Facilities Throughout Tamil Nadu...

INTRODUCTION
The Government of Tamil Nadu has recently established a new corporation - ARASU Cable TV Corporation Ltd (ACTCL) with the objective of providing high quality TV signals throughout the State of Tamil Nadu, through Cable Operators. The new MSO - ACTCL is currently setting up CATV infrastructure and facilities comprising Headends and HFC/SDH network at various locations in Tamil Nadu. ACTCL has planned to set up 4 Master Headends + 1 Super Headend. There will also be several (10 or more) IP to RF conversion Headends. These will be linked to the Master headends using leased fibre optic HFC/SDH networks to cover entire State for distribution of CATV channels and other value added services such as internet and data.

It is to be noted that this is for the first time a State Govt. owned corporation has taken an initiative in setting up such a large CATV infrastructure. It is worth mentioning that Govt. of Tamil Nadu has distributed 60 lakh 20”colour television sets to ration card holders in the state.
ARASU PROJECT DESCRIPTION

Under this project, ACTCL has established 4 Master Headends – one each at Coimbatore, Tirunelveli, Thanjavur and Vellore. ACTCL will also establish one super Headend in Chennai city and several Headends (IP to RF Conversion) at various district places to cover entire area of Tamil Nadu. Fig.1 shows location of various Headends.

MASTER HEADENDS AND SUPER HEADEND.

Each of the master Headends are of State-of-the-art design with capabilities for future expansion. It has provision to incorporate CAS encryption, SMS, auto billing etc, along with value added services such as VoD, games, internet and data services.

These master Headends have built-in redundancy at various levels including power system. Each of the Master Headends will provide 80 analogue + 80-120 digital TV/IP channels.

Each Master Headend has its own dish antennae farm with L band splitters, Video/Audio SDI patch panels, routers, IP IRDS, IP encoders, Mux, Edge QAM, IP switches and analogue modulators. All equipment is housed in 12 nos of 19” racks (44 U). High quality cables, connectors and accessories have been provided to make a fully functional and redundant Headend. The overall system runs on a 40 KVA redundant UPS and has 60KVA Diesel Generator (DG Set) set to provide

CATV HEADEND DEPLOYMENT IN TAMILNADU

Fig.1 : Location Of Various ARASU Master Headends
Fig-2 Block Diagram Of ARASU’s Master Headend

विंड-२ में अरसु के मास्टर हेडेंड का ब्लॉक डायाग्राम दिखाया गया है
power supply back up, if the power fails for an extended period.

All equipments at the Master Headend are of broadcast grade and professional quality. These have been procured from a consortium of MCBS and Thomson Grass Valley of France. These Headends have been procured by ACTCL on supply, integration, test and commission (SITC) basis at a price of US$1 million to US $ 3 million per Master Headend system. Fig-2 shows a detailed block diagram of each Master Headend.

ARASU ROLL OUT SCHEDULE

i. 1st Master Headend at Thanjavur was inaugurated on 15th July-2008 by Hon. Chief Minister of Tamil Nadu. This Headend is operational and has commenced providing signals to nearby regions on a trial basis.

ii. 2nd Master Headend at Coimbatore was commissioned and inaugurated by Mr. Brijeshwar Singh, CEO ACTCL on 15th August-2008.

![The Master Headend Installed At Thanjavur/Coimbatore/Tirunelveli](image_url)
iii. 3rd Master Headend at Tirunelveli along with the Madurai HE has been commissioned and inaugurated on 15th September 2008.

iv. The Super Headend at Chennai is still in the planning & procurement stage. This Super Headend will provide 200 digital and 80 Analogue TV channels and will have provision for HD capability for all 200 TV channels. It will also have all the other advanced features and facilities available in other master Headends.

v. A Master Headend at Vellore is also being commissioning stage.

ARASU Will Decide & Deploy Its CAS System Only After Setting Up Its Chennai Super Headend

IP TO RF HEADENDS
ACTCL has also made a plan to deploy more than 10 IP to RF conversion Headends to cover various districts of Tamil Nadu. This system has been deployed at Madurai and is under testing over Railtel’s SDH network. This HE will provide 80 analogue + 80 digital channels with high quality for distribution in the entire district by cable operators.

COVERAGE PLAN, CAS AND SUBSCRIPTION.
ACTCL has set itself a target to achieve a subscriber base of about 25 to 30 Lakh homes within

CORRECTION:
Last Month's article indicated on page 83 "A Single STM-4 Circuit Can Carry 2500 Digital TV Channels". This was a typographical error, and should have read "A Single STM-64 Circuit Can Carry 2500 Digital TV Channels."
In 1971 Mr. G.C Jain completed his post graduate degree in Advance electronics from Indian Institute of Science (I.I.Sc.), Bangalore & joined Space Application Centre (ISRO) Ahmedabad.

Mr. Jain was with ISRO for 16 years & Jain has worked with renowned scientists Dr. Vikram A. Sarabhai, Dr.APJ Abdul Kalam (Former President of India), Prof. Satish Dhavan and Prof. Yashpal.

Mr. Jain founded ‘MCBS’ in 1985. MCBS has developed several new technologies, including IP to RF Analog & Digital conversion systems for CATV Headends.

Mr. Jain has more than 150 technical papers and contributions to his credit. He is fellow member of Institute of Electronics & Telecommunication Engineering Society (India), Fellow Member of Broadcast Engineering Society (India) and chairman of BES(I), Gujarat Chapter.

Mr. Jain is a recipient of the Udhyog Shree & Udhyog Rattan Award.

1 year period. ACTCL has planned a subscription fee of Rs.100 for a bouquet of 80 TV channels (45 Pay TV channels + 35 FTA channels).

Presently, all master Headends have been put on a trial run with 70 TV Analogue channels as ACTCL is in the process of acquiring feeds from various PAY TV Channel broadcasters and distributors. ARASU has acquired feeds from Zee Turner and others but have yet to receive feeds from SUN TV, Star TV and Sony’s One Alliance. A case is pending with TDSAT for a decision on these feeds.

ACTCL has not firm up on CAS deployment and it will take a decision after it launches services from Chennai Super Headend.

CONCLUSION

Although ACTCL has launched Cable TV services with high quality and broadcast grade Headends, it is to be seen how they will compete with existing MSOs namely Sumangali Cable Vision, Hathway and others to reach the targeted subscribers.

It is sure, last mile operators and subscribers will be benefiting from this competition in the State of Tamil Nadu and should provide a win-win situation for both.

ARASU CATV

1971 में श्री जी जी जैन ने विज्ञान और तकनीकी इंस्टीट्यूट ऑफ़ माइक्रोप्लॉट एवं माइक्रोप्लॉट ऑफ़ माइक्रोप्लॉट (I.I.Sc.) में इलेक्ट्रॉनिक्स में पेट्रोलियम इंजीनियरॉग डिग्री हासिल की और अभ्यास वातावरण में ग्रामीण प्रौद्योगिकी सेंटर (एमआईटी) में जुड़े। श्री जैन, 16 वर्ष तक इससे काम करने में नियंत्रण देता और जाने-जाने उसके साथ रहे और जाने-जाने उसके साथ रहे और जाने वाले वेतनको में विभिन्न एमआईटी, डॉ. एमआईटी और अद्वितीय कला (भारत के पूरे ग्रामीणों के लिए) पर मिश्रित विभिन्न और फ्राइ के बारे में काम किया।

1983 में 'एमाइए' स्वीकार किया।

एमाइए से कई बेहतर कार्यक्रम का विकास किया, जिसमें पीएचडी हेडकेज के द्वारा इंटरनेट पर एप्सन और हिन्दूस्तान संग्रह फिल्म स्टूडियो शामिल हुए।

श्री जैन के हिस्से में 150 में आचार तकनीकी प्रदर्शन और लेख है। वे इंटरनेट ओपन इलेक्ट्रॉनिक्स और टेलीकंप्यूटिंग इंजीनियरिंग में सिमराइटी (डिजिटलिस्ट), बॉयकाफ्ट इंस्टिट्यूट इंजीनियरिंग में सिमराइटी (डिजिटल) के मानद नाम और गुरुजी बेस्ट ऑफ़ इंडिया (IO) के अनुसार रहे हैं।

श्री जैन को 'दुर्गा' और 'दुर्गा' द्वारा अवार्ड भी प्रदान किया गया है।