



Information Brouchure

**Society for
Andhra Pradesh Network**
(Dept. of Information Technology & Communication)

S
A
P
N
E
T



మన tv





BACKGROUND



Society for Andhra Pradesh Network (**SAPNET**) is a major communication infrastructure initiative of the department of IT & C, Government of Andhra Pradesh. It is mandated to run 5 television channels (under the name **MANA TV**) and one data channel.



The primary purpose of the channels is to provide Distance Learning, Agriculture Extension, Rural development, Telemedicine and E-governance. The user agencies take the best teaching talent from premier institutions and extend it to the entire State. A large number of first generation learners at the institutions benefit from educational programmes of MANA TV. SAPNET also provides an interactive forum for regular exchange of information and an avenue for updating of knowledge and skills. It is being used effectively for Distance mode training for Panchayath Raj and Rural Development department functionaries, and other departments are constantly exploring its use for their needs.

SAPNET Land Marks

- ❖ Premises area: 2.3 acres donated by Dr. BRAOU
- ❖ On 8th July 2000, a MOU was signed with ISRO for pilot transmission.
- ❖ On 1st Nov 2000, up-linking of the signal for experimental transmission commenced from MCF, Hassan in Karnataka.
- ❖ On 1st April 2002, the earth station (Hub) was installed and commissioned under I&PR.
- ❖ On 22nd March 2003, Society for Andhra Pradesh Network (SAPNET) was registered under the Societies Registration Act.

Purpose :- MANA TV is a major communication network of Andhra Pradesh for Educational programmes transmission.

❖ To provide Distance Education/Learning through MANA TV.

Reach: First Generation Learners at the institutions level in AP.

How to Receive: Through Receive Only Terminals (ROT)

MANA TV Connectivity

- ❖ The success of Mana TV in Hyderabad, Andhra Pradesh has prompted the Government of India to extend the concept nationwide
- ❖ It serves as the regional network of A.P for Distance Education & Training
- ❖ Reaching out at grass root level learners.
- ❖ SAPNET network all State-run educational institutions (Schools, Junior Colleges, Degree Colleges, ITIs etc) Professional Educational institutions (Engineering, Medical, Polytechnic etc) for distance learning.
- ❖ Rural Development & Panchayath Raj Department (AMR-APARD & NREGS) functionaries and elected representatives.
- ❖ Social Sector institutions Society for Elimination of Rural Poverty (SERP) Empowerment of women (SERP - Self Help Groups/Mahila Samakhya) programmes, Women Development & Child Welfare.
- ❖ Receive terminal at State administrative offices like DC/MPDO/MDO/MRO/ RDO/MRC, Director General Police Training Centers, Agriculture extension services.
- ❖ Interactive training modules, live transmission & an instantaneous teleconference facility is available for answering viewers doubts.

ORGANIZATION



Chief Executive Officer (CEO) heads the SAPNET. Professionals experienced in educational TV production, broadcast engineering and management run the day-to-day operations of SAPNET.

The apex body of SAPNET is its Governing Council (GC) headed by a Chairman (Chief Secretary, Government of Andhra Pradesh). The principal secretary, IT&C, GOAP, is the vice-chairman and CEO, SAPNET is the member secretary. The finance committee reviews the budget proposals and recommends to the GC for approval. The Governing Council, as a policy making body approves the proposals and sets the vision for future.





The decision-making process is decentralized and responsive to the needs of the user agencies. The participating departments generate the ideas, programme strategies, and discuss with the MANA TV production team. Based on the content, production feasibilities are chalked out for participating institutions. The content will be presented by the expert and MANA TV will take care of the transmission. The user departments supply programmes content and schedule, based on which SAPNET will telecast the live/pre-recorded programmes. The SAPNET plays facilitator role to realize the user agencies tasks. SAPNET @ YOUR SERVICE so reach us over a tele/cell phone, email and by post. All the programmes and other details are posted on the website.

Awards won

- ♦ INTACH Heritage award won in 2005 for architectural value of the building and surrounding rock formation (Presented by INTACH, Hyderabad chapter, 2005.)
- ♦ Won Bronze Icon in 2005 for 'Innovative Operations Professional Technology' in Education award from Orissa Govt.

What is the Potential ?

The transmissions are received in the Educational Institutions/Mandal offices across the state with a low cost receive only terminal known as ROT. The facilities at the studio allow a two way audio interactivity between distant end viewers and the experts in the studio on live transmissions put out on Channel 2 / Channel 3. Thousands of viewers can watch these channels simultaneously. For Example :

- ♦ **Honorable Minister for Primary Education** addressed about 1.5 lakh teachers on 24-11-2009, on improving results in the ensuing tenth class exams.
- ♦ **Commissioner, Collegiate Education** addressed thousands of principals and teaching staff of the Degree colleges, on 23-1-2010.



Which departments use Mana TV ?

Education : State Council of Educational Research & Training, Board of Intermediate Education, Department of Medical Education, Dr. B.R. Ambedkar Open University, State

Institute of Educational Technology, Commissionarate of Collegiate Education, Technical Education, Other Govt. Depts: Panchayat Raj and Social Welfare, Andhra Pradesh Academy of Rural Development, National Rural Employment Guarantee Scheme, Society for Elimination of Rural Poverty, Labour Employment Training & Factories, Health Management and Research Institute, Agriculture, Rajiv Vidya Mission, Institution for Electronic Governance, Women Development & Child Welfare, A.P. Open School Society.

Who watch Mana TV transmission ?

- ♦ Thousands of School and College students watch pre recorded and live transmissions each working day.
- ♦ Medical students across the state watch special programs thrice a week on important topics of relevance.
- ♦ Thousands of school teachers watch RVM live transmissions on teaching techniques.
- ♦ Thousands of students about to pass out watch special lessons on soft skills through Jawahar Knowledge Centers (JKC) and this improves their employability.
- ♦ **Each week thousands - nearly 20,000 to 30,000 field officers throng mandal offices to interact with senior officials.**

Who deliver the content ?

Experts in each field are selected by respective departments and trained on Television lesson delivery. In addition outside experts are also inducted into these programs. A lot of effort goes into the preparation of these lessons by these experts, which is ordinarily not possible by the teachers in the institutions.

MANA TV CHANNELS



SAPNET is mandated to run 5 television and one data channel

- Channel - 1 : Higher & Technical Education**
- Channel - 2 : Live Interactive for all users**
- Channel - 3: Live interactive for Distance Education & Training for Human Resource, Social Sector & Agriculture, Rural Development & Panchayat Raj**
- Channel - 4 : School Education**
- Channel - 5 : Jawahar Knowledge Centres (Institute for Electronic Governance)**

Mana TV Channels Utilization by User Departments

The following is the outline scope of time slots under various channels utilized by user departments. The time slots are subject to change from time to time depending upon user requirements.

Time Slots for MANA TV Channels

Channel - 1 : Higher & Technical Education

- **Board of Intermediate Education Programmes**
09:00 am to 09:30 am & 01:15 pm to 01:45 pm (Mon to Fri)
- **Dr. B.R.Ambedkar Open University Programmes**
09:30 to 10:30 am & 04:00 pm to 05:00 pm (Mon to Sun)
- **Engineering Education Programmes (SONET)**
11:00 am to 12:00 noon & 2:30 pm to 3:30 pm (Mon to Fri)
- **Commissionerate of Collegiate Education**
12:30 pm to 01:15 pm & 01:45 pm to 2:30 pm (Mon to Sat)

Channel - 2 : Live/Interactive for all users

- **SCERT Teacher Education and School Education**
10:00 am to 10:45 am; 01:45 pm to 02:30 pm (Mon to Sat)
- **Commissionerate of Collegiate Education**
11:00 am to 11:45 am (Mon to Sat)
- **Director Medical Education/MH & FW**
12:00 noon to 01:00 pm (Mon to Wed)
- **Board of Intermediate Education Programmes**
04:00 to 4:45 pm (Mon to Wed)
- **Singareni Collieries Company Ltd., Programmes**
11:00 am to 12:00 noon (On Sundays)

Channel - 3 : Live/Distance Training for Rural Development & HRD

- **MG National Rural Employment Gaurantee Scheme (MGNREGS/CRD)**
3:00 pm to 4:00 pm (Wed)
- **AMR-APARD Programmes**
11:00 am to 01:20 pm; 02:00 pm to 04:00 pm (Thu)
- **Rajiv Vidya Mission (SSA) Programmes**
10:00 am to 05:00 pm (3days/Month)
- **Society for Elimination Rural Poverty**
2:45 pm to 4:45 pm (3rd Saturday)
- **Women Development & Child Welfare**
2:45 pm to 4:15 pm (Last Sat/Fri)

Channel - 4 : School Education

- **SCERT - School Education and Teacher Education**
10:00 am to 10:30 am; 10:45 am to 11:15 am;
11:30 am to 12:00 pm; Mon to Sat) School Education
02:00 pm to 2:30 pm (Mon to Sat) Teacher Education
- **State Institute of Educational Technology**
2:30 pm to 3:00 pm (Mon to Sat)
- **A.P. Open School Society**
10:00 am to 12:00 noon (2nd Sat & Sun)

Channel - 5: Jawahar Knowledge Centres (JKCs)

- **Institute for Electronic Governance**
11:00 am to 1:00 pm (Mon to Sat)

OUR FACILITIES

SAPNET undertakes two kinds of Television programmes production activity i.e. indoor and outdoor shootings/production. Indoor productions,i.e. live transmissions is one part put out from studio-1 for channel-2 & 3 user departments. One way video and two-way audio facility is established. On these channels user departments/ channel partners deliver the well prepared content through live transmission and conduct teleconference with field functionaries/elected representatives/administrative personnel, distance training and workshop. SAPNET also under takes the in-house production for user departments taking the help of empanelled producers.

To interact with subject experts present during live transmission from Studio the SAPNET has provided toll free number & two dedicated BSNL telephone lines



Outdoor production: The user departments approach for off-line production for pre-recorded transmission. The content and the subject expert names list is supplied by user departments for outdoor production. Production scripts are developed by teachers/lecturers/content experts in accordance with the current curriculum. The user departments participate in script generation and academic previews to ensure that the content fits their requirements.

For the production of pre-recorded programmes, SAPNET empanel producers through a process of screening by an Empanelment Advisory Committee. The finished programmes produced by outsource producers are supplied to the respective user departments for scheduling.

INFRASTRUCTURE

Studios

The production facilities have been set up for in house production, online programmes recording and telecast of live transmission. MANA TV has a 220 sq m studio, equipped with 3 digital color cameras, Teletop camera, teleprompter, Laptop for power point presentations, and other facilities like DVE, multi-lingual character generator, Plasma TV for live programmes monitoring. And state of the art lighting & sophisticated cool lights are used to light up the huge studio set in 2009 which has been set up to be useful for all users.



ENG Camera Unit

DV format.ENG cameras with accessories are also available for outdoor production.The equipment can be hired by Mana TV user departments. Facilities can be used for recording of outdoor events like academic events, science faire, workshops, and project works display by students, demonstration etc.

Edit Suits

For the post-production, non-linear and linear edit suits with graphic facilities have been provided. Editing can be done both in Beta SP and digital format (DV). Velocity Quartz software installed in NLE edit suit.



Server

Professional quality video server with storage capacity of six channels for programme scheduling/sequencing editing/



insertion and transmission facility with a storage capacity for 500 hours (for all channels put together) is available with two numbers of Ingests and computer interface and video/audio interface distribution.Tape playback facility for transmission with the provision of analog and digital video tape recorders is also available. Computer Graphics system is available in the server for captions display.

Earth Station (HUB)

The MANA TV HUB is a standard uplink for the five educational channels. It also provides two-way broadband satellite communication systems for internet Protocol (IP) over Satellite. It is used for both purposes i.e. Transmitting and Receiving programmes (Signal) in this mode.



The earth station is co-located with the studios and is capable of transmitting five digitally compressed video channels and one data channel in MCPC mode.The earth station uses DVB MPEG-2 encoders for video.The channels are transmitted through a 7.2 m antenna to a Ku band transponder on NSS-12 Satellite.

RECEIVE ONLY EQUIPMENT (ROT)

Essential

A typical ROT consists of

1. Ku-band Receiving Dish/Antenna of 1.1m or 1.2m diameter with Non Penetrating Mount
2. LNBC with feed for Receiving Ku-band signals
3. Integrated Receiver Device (IRD) or Set Top Box (STB) Digital Satellite Receiver with Remote operation to receive 2-45Mbps of Ku-band signals.
4. IF Cable from Dish to IRD and connecting cables from IRD to TV
5. TV set with Audio and Video input output facilities with remote (29' TV/42'Plasma TV)



Optional

1. UPS of 600 VA/1KVA capacity with one hour backup
2. Cabinet for housing TV Receiver, UPS, and IRD
3. Earthing, lightning arrestor, power boards, etc

Two way video interactivity:

SIT (Satellite Interactive Terminal) similar to EDUSAT platform, MANA TV HUB extended the capability by introducing Satellite Interactive Terminal on existing NSS-12 platform. A typical SIT terminal has the following features

- ❖ Internet Access and IP-based Services
- ❖ Video Conferencing
- ❖ Distance Education
- ❖ Virtual Private Networks

The remote terminals has a 2.4 meters antenna, Block Up Converter (BUC), Return Channel Satellite Terminal (RCST) PC based Video conferencing, UPS.



The system supports up to 200 VSATs and has capability to handle 1Mbps out bound data rate and 512Kbps in bound data rate. The band width for out bound is 1.4 MHz and 0.8MHz for in bound.

Interactivity

Steps for Interaction with Television Teacher and Experts:

1. **Call the Number – 040-23551989, 040-23553473, 1800-425-4038.**
2. **As soon as you have the connection tone down the volume of your television set.**
3. **Identify yourself by Name & School / Institution.**
4. **Ask your question and ensure your question has been understood.**
5. **Put the Telephone receiver down.**
6. **Raise the volume of the TV set & Listen answer.**



Remember to tone down the volume of your television set while speaking

ROT's in the network

1. APNET project - 1445 (Govt. Schools, Welfare dept. Schools, G.Jr.C, GDC Technical Education, Engineering, Medical and PG centers)
2. RVM/SSA project - 5013 (Govt. Primary School Complex, MRCs)
3. MPDOs - 1097 (Training Centers, MRC, MPD office, etc)

SATELLITE INFORMATION



Satellite – NSS-12, 57° E Longitude

Up-linking and down linking frequency parameters

- Uplink frequency Band : 14077 MHz
- Downlink frequency Band : 12329 MHz
- EIRP (SAPNET) : 43.2 dBW
- Symbol rate : 8570 KS PS_S
- Forward Error Correction : 2/3
- Down link Polarization : vertical, Linear





YEAR WISE TRANSMISSION DETAILS

Year	Live	Recorded Hrs	Total Hrs
2001-02	000	2,025	2,025
2002-03	222	2,613	2,835
2003-04	789	2,613	3,402
2004-05	935	2,633	3,568
2005-06	766	3,004	3,770
2006-07	734	7,188	7,922
2007-08	319	2,316	2,635
2008-09	546	2425	2971
2009-10	750	2036	2786



SAPNET MANA TV RATE CARD (w.e.f. 1st April, 2009)

No	Nature of work	Infrastructure	Rate
1.	Previewing Beta/ DV Cam tapes	Beta/DV cam player and monitor	Rs.200/- per hr.
2.	Out Door Shooting	DV Camcorder (ENG) with Assistant	Rs.1, 500/- 8 hrs shift
3.	Editing	A/B/Roll Edit suit (without editor)	Rs.300/- per hr.
4.	Editing	Non-Linear Edit Suit (NLE) (without editor)	Rs.300/- per hr.
5.	Studio Production	Studio floor with 3 camera setup, Teleprompter,	Rs.20, 000/- (10am-5pm)
	a. Full Shift	Tabletop camera, Laptop for PPT presentation, Studio lights & PCR	Rs.5, 000/--extra for use beyond 5pm-9pm.
	b. Half Shift	'DO'	Rs.14, 000/- ½ shift (Between 10am and 5pm)
	c. Live From Studio Recording/ Transmission Or Transmission from Server	'DO'	Rs.7, 000/--hr i.e. 5mints -60mints Only for Govt. Institutions
6.	Up-linking to Satellite (As of now it is not charged.)	Earth Station	Rs. 7, 500/- per 10mints * and Rs.300/- per one mint Additional charges
7.	SAPNET Premises For Film/TV shooting	Exterior locations only	Rs.25, 000/-for 8hrs, Hiring out for shootings. Caution Deposit Rs.15, 000/-.
8.	Program Transfer	Format Conversion Recorders/ Players	Rs.750/- per hr.
	a. Beta/DV Cam	(Beta - DV Cam) Vice-Versa	
	b. Beta/DV Cam to DVD	Beta/DV Cam to VCD/DVD	Rs.250/- per hr.
	c. DVD to DVD	VCD/DVD to VCD/DVD	Rs.50/- per copy

Y. Venkateswarlu
Chief Executive Officer

Dr. V. Udaya Kumar
Manager - Production

Prof. M. Mutyalu Naidu
Executive Director (Programmes)

B.N. Yadagiri
Manager - Production

P. Suryanarayana
Earth Station Engineer

C.V.S. Murty
Accounts Officer

Our Channel Partners

State Council of Educational Research and Training
Opp. L.B. Stadium, Hyderabad. Tel : 23243191, Fax : 23231283

Institute for Electronic Governance
Hlmayatnagar, Hyderabad. Tel : 232223702, Fax : 23224276

State Project Director - Rajiv Vidya Mission/SSA
SCERT Complex, Hyderabad. Tel : 23243525, Fax : 23299089

Director Medical Education
Koti, Hyderabad. Tel : 24602514, Fax : 24656909

Board of Intermediate Education
Nampally, Hyderabad. Tel : 24603314, Fax : 24732046

State Institute of Educational Technology
Ramanthapur, Hyderabad - 500 013. Ph : 040-27038339 Fax : 27038111

Commissionerate of Collegiate Education
Nampally, Hyderabad. Tel : 24615576, Fax : 24602285

Dr. BR Ambedkar Open University
Jubilee Hills, Hyderabad. Tel : 23680200 Fax : 23544830

Society for Networking for Excellence in Technical Education
Masab Tank, Hyderabad. Tel : 23373733, Fax : 23373733

AMR - AP Academy of Rural Development
Rajendranagar, Hyderabad. Tel : 24001731, Fax : 24018656

The Singareni Collieries Company Ltd.
Red Hills, Hyderabad. Tel : 23391761, Fax : 23307653

MGNREGS Rural Development
Hillfort Road, Hyderabad. Tel : 23241227, Fax :

Society for Elimination of Rural Poverty
Hillfort Road, Hyderabad. Tel : 23241475, Fax : 23211848

Women Development & Child Welfare Department
State Home, Yousfeguda, Near Saradhi Studio, Hyd. Tel : 23732585 Fax : 23733848

Society for Andhra Pradesh Network

Mana TV Studios, Dr. BRAOU Campus,
Road No. 46 Jubilee Hills, Hyderabad - 500 033. A.P.
Ph : (Offi) 040-23556037, Fax : 040-23550239
Studio : 2355 3473, 2355 1989, 1800 425 4038
email : ceo_sapnet@ap.gov.in, www.sapnet.gov.in

