



**INFORMATION TECHNOLOGY  
DEPARTMENT**

**POLICY NOTE  
2014 – 2015**

**DEMAND NO. 31**

**Mukkur N. SUBRAMANIAN**  
Minister for Information Technology

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Government of Tamil Nadu  
2014

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**CHAPTER – I**  
**INTRODUCTION**

Tamil Nadu is one of India's most progressive States and is amongst the top three States in the Country on several economic and social indicators.

The Vision Document 2023 of our Hon'ble Chief Minister anticipates that Tamil Nadu will be known as the innovation hub and knowledge capital of India, on the strength of world class institutions in various fields and the best human talent.

Establishment of a dynamic information infrastructure that increases the access to information universally and makes decision-making faster, transparent and efficient is therefore, the need of the hour to improve service delivery and governance. Ultimately, Information Technology will be one of the major tools that will help in the transformation of Tamil Nadu into a modern economy.

Tamil Nadu has been endowed with a capable and highly skilled human resource base which is well suited to the needs of modern industry. This has helped Tamil Nadu to emerge as one of the leading players and an acknowledged Global leader in certain verticals of the Information Technology (IT) and Information Technology Enabled Services (ITES) sector such as Banking, Financial Services and Insurance (BFSI), Health Systems Management, Computer Aided Designing (CAD) and Computer Aided Engineering (CAE).

Therefore, Tamil Nadu can today be rated as one of the foremost "Knowledge States" in the country.

The Information Technology Department was set up in 1998 with the following objectives :

- **Provide Government services, both informational and transactional, to citizens, at their door steps through Internet;**
- **Bridge the digital rural-urban divide;**
- **Make Tamil Nadu the Best State in IT enabled Governance;**

- **Substantially increase the software exports of Tamil Nadu;**
- **Provide Cable TV services to all households in Tamil Nadu at reasonable rates;**
- **Provide Tamil Education through the web and take Computing in Tamil to a higher level;**
- **Enhance the quality of life of citizens through Information and Communication Technology.**

An e-Governance Policy and Information and Communication Technology (ICT) policy are in the pipeline to take the IT revolution to next stage. The enhanced Rural Business Process Outsourcing (BPO) Policy has given a new impetus to the growth of BPO sector in Tamil Nadu. Continuous efforts are being taken to attract more IT/ ITES investments in the State.

Hon'ble Chief Minister of Tamil Nadu has taken ardent steps for the issue of Digital Addressable System (DAS) License by Government of India. Once the Government of India issues the DAS licence to

Tamil Nadu Arasu Cable TV Corporation, the broadcasting of digital Cable TV Services in Chennai Metro will take the Cable TV viewing experience in Tamil Nadu to a new plane.

## **CHAPTER – II**

### **ELECTRONICS CORPORATION OF TAMILNADU LIMITED (ELCOT)**

Electronics Corporation of Tamil Nadu Limited (ELCOT), registered under the Indian Companies Act of 1956, is a wholly owned Government of Tamil Nadu Undertaking. ELCOT which was formed for the promotion of electronics industry in Tamil Nadu has transformed itself as the Information Technology arm of the Government of Tamil Nadu. ELCOT has been providing hand holding support to various Departments, Organizations, Boards, etc. of the Government of Tamil Nadu in the area of Information Technology, e-Governance, providing Internet Connectivity and Capacity Building. ELCOT is also the optional Nodal Agency for hardware procurement, software development, implementing major turnkey IT projects of the Government of Tamil Nadu and major projects of the Department of Electronics and Information Technology, Government of India. ELCOT

has established and is managing common IT infrastructure which is used by several Departments. The Tamil Nadu State Wide Area Network (TNSWAN) and Tamil Nadu State Data Centre (TNSDC) have been established by ELCOT.

The Hon'ble Chief Minister has given the brand identity 'ELCOSEZ' to the IT Special Economic Zones created by ELCOT which facilitates marketing of ELCOSEZ's lands as the 'Destinations of Choice' for IT / ITES investments.

### **INFORMATION TECHNOLOGY SPECIAL ECONOMIC ZONES (ELCOSEZs)**

In order to spread the development of IT/ITES industry throughout Tamil Nadu, ELCOT has established IT/ITES Special Economic Zones in Chennai and seven other Tier-II locations viz. Coimbatore, Madurai (2 places), Tiruchy, Salem, Tirunelveli and Hosur.

#### **ELCOSEZ-SHOLINGANALLUR, CHENNAI**

Sholinganallur ELCOSEZ is established in an area of 377.08 acres. The investment of ELCOT in this

ELCOSEZ is Rs.194 Crores. Lands have been allotted to major IT Companies such as M/s.WIPRO (80 acres), M/s.HCL (50 acres), M/s.Satyam (50 acres), M/s.Sutherland (15 acres) and M/s.Cognizant Technology Solutions Limited (20 acres) on lease basis.

The common infrastructure work was completed with an investment of Rs.42 crores. ELCOT has constructed an Administrative Building with an investment of Rs.126 lakhs over an extent of 6,358 sq.ft. M/s.WIPRO is operating from a 27 lakh sq.ft. building with 19,000 employees. M/s.HCL has constructed a 10 lakh sq.ft. building and is in operation with 10,000 employees. Apart from this, construction of a building measuring 22 lakh sq.ft. is under progress. M/s.SATYAM has completed a 6.25 lakh sq.ft.. building and is in operation with 4,200 employees. Another 2 lakh sq.ft.. of space is being added. M/s.Cognizant Technology Solutions Limited have commenced their construction work in 28 lakh sq.ft. and the work is under progress.

## **ELCOSEZ-VILANKURICHI, COIMBATORE**

This ELCOSEZ was established in 62 acres of land in Vilankurichi Village, Coimbatore. The investment of ELCOT is Rs.70 crores. The creation of common infrastructure facilities has been completed with an investment of Rs.19 crores. ELCOT has allotted 9.5 acres of land on lease basis to major IT Companies such as M/s.WIPRO and M/s.TIDEL Park Coimbatore Limited each. M/s.WIPRO has constructed an IT building in 3.5 lakh sq.ft.. M/s.Tidel Park Coimbatore Limited has completed the construction of a 17 lakh sq.ft. IT Building. Out of the 17 lakh sq.ft., 9.14 lakh sq.ft. have been allotted for IT purposes. Presently 5.31 lakh sq.ft. are occupied by 16 IT/ITES Companies.

## **ELCOSEZ-ILANDHAIKULAM AND VADAPALANJI, MADURAI**

An ELCOSEZ was established in 28.91 acres of land alienated by Government in Ilandhaikulam Village, Madurai North Taluk, Madurai District. In Vadapalanji Village, Madurai South Taluk, another ELCOSEZ was

established in 245.17 acres of land alienated by Government.

In Ilandhaikulam ELCOSEZ, ELCOT has invested Rs.34.41 crores. Common Infrastructure facilities have been created at an investment of Rs.7 crores and an IT-cum-Administrative building in 50,000 sq.ft area has been constructed at an investment of Rs.17 crores. ELCOT has allotted lands on lease basis to IT/ ITES companies such as M/s. Honeywell Technologies Limited (4.5 acres) and to M/s. Chella Software Private Limited (2.25 acres). In the IT-cum-Administrative building, ELCOT has also allotted space to some of the IT/ITES companies namely, M/s.Galaxy Infotech, M/s.AMBC Technologies Pvt. Limited, both occupying 5,785 sq.ft. of IT space. Further, ELCOT has also allotted 15,181 sq. ft. of IT space to M/s.Sai BPO Services Limited in this IT Building and they are expected to start their business shortly.

In the ELCOSEZ at Vadapalanji, the creation of common infrastructure facilities was completed at an investment of Rs.14.47 crores. The total investment of

ELCOT is Rs.45 crores. ELCOT has allotted lands on lease basis to major IT Companies such as M/s.HCL (60 acres), M/s.SATYAM (50 acres), M/s.Sutherland Global Services (5 acres), M/s.Caliber Point (5 acres) and M/s.Health Plan Systems India Limited (2 acres).

### **ELCOSEZ-NAVALPATTU, TIRUCHY**

At Navalpattu Village, Tiruchy, an ELCOSEZ was established in 147.61 acres of land. The SEZ approval was obtained for 123.23 acres of land. The total investment of ELCOT will be Rs.60 crores.

ELCOT created common infrastructure facilities at an investment of Rs.14.21 crores. Also, an IT-cum-Administrative building in 50,000 sq.ft. area was constructed at an investment of Rs.19 crores.

Lands have been allotted to the following companies on lease basis :

1. M/s Assyst International Pvt. Ltd. - 3 acres
2. M/s Health Plan Systems (India) Pvt.Ltd. - 2 acres
3. M/s iWave Systems Tech. Pvt. Ltd. - 5 acres



- |  |           |
|--|-----------|
| 4. M/s Unlimited Innovations India Pvt. Ltd. | - 5 acres |
| 5. M/s Zylog Systems Limited                 | - 5 acres |
| 6. M/s iLink Multitech Solutions Pvt. Ltd.   | - 2 acres |
| 7. M/s WNS Global Services Private Ltd.      | - 5 acres |

An extent of 11,200 sq.ft. has been allotted to IT/ITES Companies viz. M/s.iLink Systems Pvt. Ltd., M/s.Assyst Information Technologies Ltd. and M/s.Seventh Sense Limited. Further, 12,950 sq.ft. space has been allotted to M/s.Scientific Publishing Company and they are expected to start their work shortly.

#### **ELCOSEZ-GANGAIKONDAN, TIRUNELVELI**

In Gangaikondan Village, Tirunelveli, an ELCOSEZ has been established in 500 acres of land. The SEZ approval was obtained for an extent of 190 acres of land. The total investment of ELCOT is Rs.52.85 crores. ELCOT created common infrastructure facilities on an extent of 100 acres and at an investment of Rs.13 crores. ELCOT has also constructed a 50,000 sq.ft. IT Building at an investment of Rs.16 crores.

100 acres of land have been allotted to M/s.Syntel International Limited, 2 acres of land have been allotted to M/s.Deccan iServices in SEZ area and 25 acres of land have been allotted to M/s.A & D Cosmic Power in non-SEZ area. ELCOT has allotted 9,338 sq.ft. of IT space to an IT/ITES Company, M/s.Kompsos Media Pvt. Limited which has started operations.

#### **ELCOSEZ-JAGIRAMPALAYAM, SALEM**

In Jagirampalayam Village, Salem, an ELCOSEZ has been established on an extent of 164.26 acres. ELCOT's investment will be around Rs.33 crores. ELCOT has created common infrastructure facilities on an extent of 53.33 acres and works are under progress at an estimated cost of Rs.10 Crores.

ELCOT has allotted lands on lease basis to the following IT/ITES Companies in this ELCOSEZ :

- |                                       |   |           |
|---------------------------------------|---|-----------|
| 1. M/s. dB Professionals              | - | 3 Acres   |
| 2. M/s.Vee Technologies               | - | 3 Acres   |
| 3. M/s. Mahima Technologies Pvt. Ltd. | - | 3 Acres   |
| 4. M/s.GTP Infotech Solutions Limited | - | 2.5 Acres |

## **ELCOSEZ-VISWANATHAPURAM, HOSUR**

In Viswanathapuram Village, Hosur, ELCOT has created an ELCOSEZ in 174.47 acres of land. The investment of ELCOT will be around Rs.40 crores. The creation of common infrastructure work in this ELCOSEZ is under progress at an estimated cost of Rs.24 crores. The construction of 50,000 sq.ft. IT-cum-Administrative Building work is under progress at an estimated cost of Rs.15 crores.

In this ELCOSEZ, the lands have been allotted to the following companies on lease basis :-

1. M/s. Okaya Infocom - 10 acres
2. M/s.CRM IT Solutions Pvt.Ltd. - 3 acres
3. M/s.CRM Infotek India Pvt.Ltd. - 2 acres

## **HARDWARE PROCUREMENT**

ELCOT has been nominated by the Government as an Optional Procurement Agency for all Government Departments to procure IT related products and services. ELCOT is procuring IT Software and Hardware like Servers, Desktop Computers, Laptop computers, i-Pad,

Tablets, Bio-metric devices, IP Camera Surveillance System, Printers, UPS, Scanners and all Network devices of the latest configuration at competitive price.

ELCOT is supplying all kinds of IT products to the major departments such as Revenue, Rural Development & Panchayat Raj, Forest, Health & Family Welfare, Agriculture, School Education, Higher Education, Commercial Tax & Registration Department, etc.

ELCOT has successfully implemented IP Camera Surveillance system in 575 Sub-Registrar offices, 3 Government Observation Homes and Hardware supply to implement Automated Treasury Bill Passing System of Treasuries & Accounts Department. Also, e-Smart Class Room in about 150 Higher Secondary Schools, IP Surveillance Camera installation in 200 Amma Unavagams in Chennai and Hardware supply to about 1,000 Middle Schools in Villupuram district are being implemented.

## **SCHEME FOR DISTRIBUTION OF LAPTOP COMPUTERS**

As announced by the Hon'ble Chief Minister, 8,98,866 Laptop computers were procured by ELCOT during the year 2011-12 and distributed to students studying in Government and Government aided schools, Government and Government aided Arts and Science and Engineering Colleges and Polytechnics, to enable them to acquire better computer skills. During the year 2012-13, 7,30,000 Laptop computers were procured and distributed. 5,65,000 laptops were ordered for the year 2013-14. 3,49,000 laptops have been distributed and 2,16,000 laptops are being distributed.

## **CHAPTER – III**

### **INFORMATION TECHNOLOGY**

#### **INFRASTRUCTURE**

Information Technology (IT) Infrastructure is the integrated framework upon which the digital network operates. The IT Infrastructure includes Data Centre, Computer Networks and Database Management devices. Tamil Nadu is one of the few States in India to have a full fledged State Wide Area Network and State Data Centre. Tamil Nadu has the following IT infrastructure at its disposal :-

**i) Tamil Nadu State Wide Area Network (TNSWAN)**

- a) Horizontal Connectivity
- b) Broadband Connectivity
- c) Redundant Connectivity

**ii) Tamil Nadu State Data Centre (TNSDC)**

**iii) Server Farm**

**iv) National Knowledge Network (NKN)**

**v) Disaster Recovery Center (DRC)**

**vi) Cloud Computing Set up at TNSDC**

## **1. Tamil Nadu State Wide Area Network (TNSWAN)**

Tamil Nadu State Wide Area Network is a shared scheme between the State and Central Government at an estimated cost of Rs.181.69 crores (Gol share is Rs.97.17 crores and State share is Rs.84.52 crores). TNSWAN, having 708 Points of Presence (POPs), has been established in the State by ELCOT and services such as Voice, Data, Internet and Video for Government Departments are being provided through the Network. TNSWAN provides highly secured connectivity from 2 Mbps to 8 Mbps bandwidth to all the District Collectories, Taluk Offices and Block Development Offices (BDOs) thereby facilitating access by the Government departments to the Servers placed at TNSDC. The Build, Own, Operate and Transfer (BOOT) Operation of the Network was completed on 30.11.2012 and Phase-II operations of TNSWAN for 3 years commenced on 09.09.2013.

### **(a) Tamil Nadu State Wide Area Network (TNSWAN) – Horizontal Connectivity**

In order to provide connectivity to Government Departments outside TNSWAN, for getting intranet

facility for rolling out their applications and also to avail other services such as Voice, Data, Internet, Video Conferencing, etc., Horizontal Connectivity has been made available through TNSWAN Points of Presence (PoPs).

So far, Horizontal Connectivity has been provided to about 1,935 offices of Government Departments such as Commercial Taxes, Tamil Nadu Water Supply and Drainage Board (TWAD), Tamil Nadu Health Systems Project (TNHSP), Treasuries & Accounts, Registration, Employment & Training, Forest, Tamil Nadu e-Governance Agency (TNeGA), State Health Society, Tamil Nadu Housing Board (TNHB), Survey and Settlement, Tamil Nadu Cement Corporation Limited (TANCEM), Tamil Nadu Civil Supplies Corporation, etc.

### **(b) Broad Band Connectivity**

Technological advancements have shrunk the world and communications have become real time which demand more bandwidth. Broadband is one

such high speed data transmission facility which can carry a large amount of data by offering more bandwidth. ELCOT is providing Broadband connectivity to Government Offices at competitive rates. About 25,000 Government offices including schools have been provided with Broadband connectivity.

**(c) Redundant Connectivity**

Tamil Nadu State Wide Area Network (TNSWAN) was created at the Secretariat, Raj Bhavan, DGP Office, Collectorates, Taluk Offices, BDO Offices etc. The Network links all the Government departments to provide Voice, Data and Video Connectivity for improving the delivery of services to the public and for improving the response-time and transparency.

TNSWAN vertical connectivity is provided to all Districts, Taluks, BDOs and RDOs by using the bandwidth provided by BSNL. In order to strengthen TNSWAN vertical connectivity and also

to ensure uninterrupted connectivity at the Districts, Taluks, BDOs and RDOs, a secondary 2 Mbps MPLS-VPN (1:1) redundant connectivity is being implemented. Provisioning of 78 links has been completed and 17 links are ready for testing.

**2. Tamil Nadu State Data Centre (TNSDC)**

Tamil Nadu State Data Centre (TNSDC) is one of the core e-Governance back bone infrastructure under National e-Governance Plan (NeGP). It is a shared scheme between State and Central Governments as per the State Data Centre (SDC) Guidelines of Department of Information Technology (DIT), Government of India (GOI), at an estimated cost of Rs.60.80 crores (GOI share Rs.55.80 crores & State Share Rs.5.00 crores). Tamil Nadu is the first State in the country to obtain the ISO/IEC 20000-1:2005 and ISO/IEC 27001:2005 Certification for the Data Centre operations and for Management of Information Security which is an important milestone in the operation of TNSDC.

TNSDC is being maintained with a strict Service Level Agreement (SLA) for ensuring 24 X 7 operations. TNSDC is a highly secured infrastructure in which the Government departments can host their applications. Some of the Government applications which are operational in TNSDC are Tamil Nadu Health Systems Project, Chennai Metro Rail Project, Enterprise Resource Planning (ERP) for Priceless Fan, Mixie, Grinder and Priceless Laptop scheme etc. The TNSDC is currently serving the complete requirements of more than 15 departments of the Government and has currently reached 80% of its maximum capacity both in terms of space and IT infrastructure.

### **3. SERVER FARM**

In order to provide common facilities like Load balancer, Antivirus, Firewall etc., to the departments while hosting applications at TNSDC, a 'Server Farm' is being created at TNSDC at an estimated cost of Rs.183.17 lakhs. This will allow the departments to comply with Vulnerability Assessment and Penetration Tests before hosting applications at TNSDC. The Server Farm would

be housed at the staging area of the TNSDC with necessary hardware, software and testing tools.

### **4. National Knowledge Network (NKN)**

National Knowledge Network (NKN) is a national level high speed Network established by Government of India. NKN provides a common platform to the scientists, researchers, doctors, scholars and students to work together for advancing human development by connecting the academic institutions across India and the global scientific community. The bandwidth through NKN is being provided by Government agencies such as Bharat Sanchar Nigam Limited (BSNL), Powergrid Corporation of India Limited (PGCIL) and RailTel. NKN also provides Network platform for National e-Governance Projects for their roll out at national level. The NKN consists of an ultra-high speed core, starting with multiple 2.5/10 Gigabits per second and progressively moving towards 40/100 Gigabits per second (Gbps) connectivity. 1 Gbps speed line from NKN has been terminated in TNSDC and TNSWAN with 200 Mbps Internet usage. Through the NKN connectivity, all the TNSWAN & TNSDC users are

utilizing 200 Mbps secured internet bandwidth of NKN, which is above the currently provisioned internet bandwidth of 34 Mbps (TNSWAN) and 32 Mbps (TNSDC), and also can access the applications that are hosted at the national level. The applications can be accessed through NKN at a very high speed which is several times the earlier speed.

### **5. Disaster Recovery Centre (DRC)**

The Tamil Nadu State Data Centre (TNSDC) enables the State Government and the Departments to host their applications and services on a common, redundant, secured and controlled environment, easing the process of integration and resource optimization. However risks pertaining to natural disasters such as Tsunami, earthquakes, floods etc, pose a challenge to any Data Centre and hence establishment of a Disaster Recovery Centre (DRC) becomes mandatory to ensure the business continuity of the departments which are providing e-services. ELCOT has been nominated as the implementing agency for setting up of Disaster Recovery

Centre (DRC) in a phased manner and a Consultant has been appointed through tender.

### **6. Cloud Computing Setup at TNSDC**

Tamil Nadu State Data Centre (TNSDC) has been equipped with infrastructure to provide State Departments with seamless, highly reliable / robust, shared and secured infrastructure with scalable capacity. For better and optimal utilization of the computer infrastructure and utilizing the same infrastructure amongst multiple applications, adoption of Cloud Technology components in TNSDC is essential. This technology will also drive consolidation of IT resources resulting in power savings which will be a significant step towards adopting Green technologies.

Cloud based service delivery is being leveraged in the TNSDC, which will provide better utilization of IT resources, dynamic scalability, and appropriate disaster recovery of applications and data. This Cloud set up will drastically reduce the Government's expenditure on hardware, software and maintenance. The cloud solution provides the ability for departments to automatically

provision the services via a Web Portal. This solution also provides all the necessary components / modules which are necessary to provide (a) Infrastructure as a Service (b) Platform as a Service and (c) Software as a Service. A Cloud was established in co-ordination with C-DAC with the infrastructure of TNSDC. The Saree Dhoti application has been deployed successfully in Cloud at TNSDC and public access is enabled for this application. ELCOT Enterprise Resource Planning – Facility Management Service (ERP - FMS) module was hosted as Proof of Concept (PoC) in Cloud on 04.02.2014 and access has been enabled.

## **CHAPTER – IV**

### **TAMIL NADU e-GOVERNANCE AGENCY**

#### **Vision of Hon'ble Chief Minister as part of Vision Tamil Nadu 2023**

**“Tamil Nadu will nurture a culture of responsive and transparent governance that ensures progress, security and equal opportunity to all stakeholders.”**

#### **1. Introduction**

Tamil Nadu e-Governance Agency (TNeGA), as a State Nodal Agency has been formed to support and drive all e-Governance initiatives of the Government of Tamil Nadu. TNeGA is implementing various e-Governance projects with the objective of making all Government services, wherever feasible, accessible to the common man in an efficient and transparent manner. e-District, Common Service Centres (CSCs) in Rural and Urban areas, Capacity Building (CB) in Information and



Communication Technology (ICT) & Tools, Geographical Information System (GIS), State Resident Data Hub (SRDH), State Services Delivery Gateway (SSDG) are some of the important projects under implementation by TNeGA.

The Tamil Nadu e-Governance Agency aims to fulfill the above Vision of the Hon'ble Chief Minister, through use of Information Technology in Governance and delivery of services to public at their doorsteps.

## 2. Institutional Framework

The Institutional Framework (Figure 1) available for e-Governance activities at State Level is as follows :

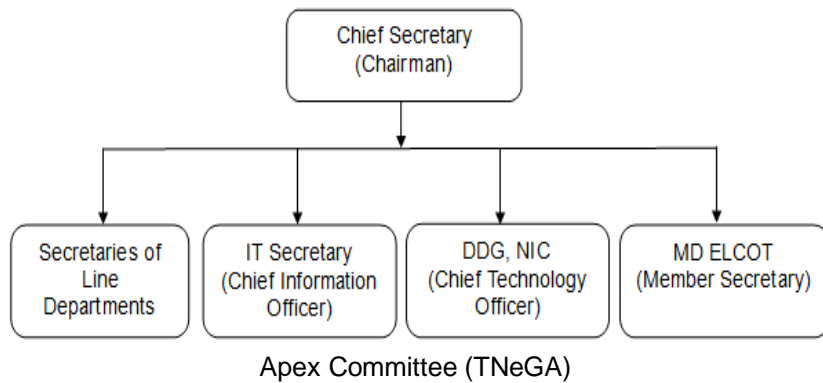


Figure - 1

## 2.1 State Apex Committee

The implementation of Mission Mode Projects (MMP) of National e-Governance Plan (NeGP) at all levels of Government is driven by the Apex committee headed by the Chief Secretary. It oversees and provides policy direction to State e-Governance initiatives and MMPs and ensures Intra Departmental co-ordination. It is supported by **State e-Governance Group (SEG)** for providing standardization and consistency through Programme Management of the e-governance initiatives.

## 2.2 TNeGA Board

The Tamil Nadu e-Governance Agency Board consists of the Secretaries of the 11 Mission Mode Departments to guide the Tamil Nadu e-Governance Agency in its e-Governance activities and deliver the services to citizens. It was recently reconstituted.

## 2.3 Directorate of e-Governance

The Directorate of e-Governance has been established and is functioning along with TNeGA with the objective of playing an advisory role to State Government

in e-Governance initiatives and implementing ICT projects across the State. As more and more Departments are implementing ICT projects, it is essential to strengthen the organizations that are acting as nodal departments / agencies in e-Governance to guide, standardize and implement, an integrated secure IT environment. To meet the above need, an IT Cadre has been sanctioned by Government with 2 Joint Directors (Technical), 5 Senior System Analysts / Senior System Engineers, 15 System Analysts / System Engineers, 60 Assistant System Analysts / Assistant System Engineers under the Technical Wing along with an Administrative wing consisting of one Deputy Director, 1 Chief Accounts Officer, 2 Assistants, 2 Junior Assistants, 1 Office Assistant. Under the Technical Wing, the feeder category would be Assistant System Analysts / Assistant System Engineers.

The following chart depicts the organisational structure of the Commissionerate of e-Governance / Tamil Nadu e-Governance Agency :

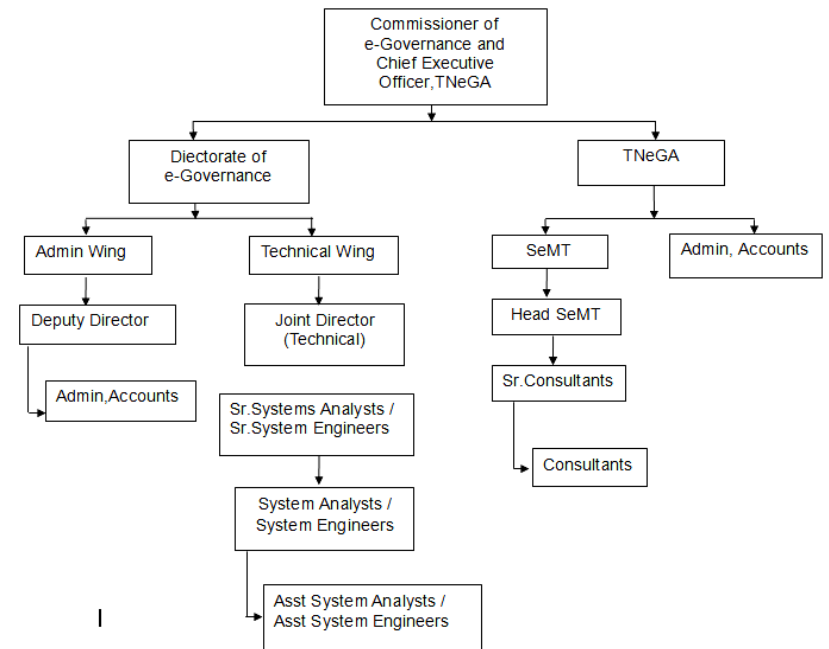


Figure – 2

## 2.4 State e-Governance Mission Team (SeMT)

A State e-Governance Mission Team (SeMT) is functioning under the IT Department and is deployed in TNeGA. It comprises a group of IT Consultants in Programme Management, Technology Management, Financial Management and Change Management areas. The SeMT Consultants are handholding the Departments in their e-Governance initiatives and support the

implementation of **Mission Mode Projects** (MMPs) of NeGP. The Consultants act as an internal advisory body to the State Government Departments and help them to create department level ICT Roadmap and awareness.

## **2.5 District e-Governance Society (DeGS)**

The Government have ordered the formation of District e-Governance Societies (DeGS) in all the Districts for implementing the e-Governance projects. Accordingly, District e-Governance Societies (DeGS) have been formed in all the Districts. The District e-Governance Society is headed by the District Collector, except in Chennai, where the Commissioner, Corporation of Chennai is the Head. The district level officials of all service delivery Departments are the members of the Society. The DeGS is responsible for the implementation of the ICT projects at District level. The DeGS will play a key role in the post- implementation and operations of the e-Governance Programme at District level.

For smooth functioning of the DeGS, a sum of Rs.10 lakhs is being provided by the Government as seed money assistance to each DeGS.

## **3. Projects, Programmes and Schemes**

### **3.1 e-District Programme**

The e-District Programme is one of the State Mission Mode Projects under National e-Governance Plan(NeGP), which aims at electronic delivery of citizen centric services through Common Service Centres (CSCs), Facilitation Counters, Primary Agriculture Co-operative Credit Societies (PACCS) etc., by using the common infrastructure viz., State Wide Area Network (SWAN), State Data Centre(SDC), State Portal & State Services Delivery Gateway (SSDG). Tamil Nadu is one of the States chosen for Pilot implementation of e-District Project. Initially, 6 Districts of Tamil Nadu namely Ariyalur, Coimbatore, Krishnagiri, Perambalur, The Nilgiris and Thiruvavur were chosen as Pilot e-Districts. e-District services have been rolled out in all 32 districts. At present under e-District Programme, the following 19

services are offered through State Portal, SSDG Framework.

Category of Services	Department	Service Name
Certificate Services	Revenue	1. Income Certificate
		2. Nativity Certificate
		3. Community Certificate
		4. No Graduate Certificate
		5. Deserted Women Certificate
Social Welfare Scheme	Social Welfare & Nutritious Meals Programme	6. Moovalur Ramamirtham Ammaiyar Ninaivu Marriage Assistance
		7. Annai Theresa Ninaivu Marriage Assistance for Orphan Girls
		8. EVR Maniammaiar Ninaivu Marriage Assistance for daughter of Poor Widows
		9. Dr.Muthulakshmi Reddy Ninaivu Inter-Caste Marriage Assistance
		10. Dr.Dharmambal Ammaiyar Ninaivu Widow Re-Marriage Assistance
		11. Chief Minister's Girl Child Protection Scheme I & II

Table - 1

The following Scholarship schemes of AD&TW Department and BC, MBC & Minorities Welfare Department are offered through e-District Portal in all Districts through the respective colleges.

Scholarship Scheme	Adi-Dravidar & Tribal Welfare	12. GoI Post matric Scholarship for SC Students
		13. GoI Post matric Scholarship for ST Students
		14. State Special Scholarship for Post matric Students
		15. Higher Education Special Scholarship Scheme
		16. Issuance of Post Matric Scholarship
	Backward Classes, Most-Backward Classes, Minorities Welfare	17. Educational Assistance to the students in Professional Courses
		18. Educational Assistance to Graduates
		19. Educational Assistance to Polytechnic Students

Table - 2

Out of 32 Districts, 7 districts namely Krishnagiri, Perambalur, Ariyalur, Tiruvannamalai, Kanyakumari, Tuticorin and The Nilgiris have fully rolled out the entire range of e-District services.

Apart from the above mentioned services, certain additional services of other departments have been identified and are proposed to be offered through the e-District Portal.

### 3.2 Common Service Centres

The Government, realizing the basic needs of the common man, has taken steps to provide Government Services to the common man in his locality through Common Service Centres. As of now, the Common Service Centres are delivering e-District services and as well as other private services that are useful to the common citizen. Presently, 1,572 centres that includes Common Service Centres and Primary Agriculture Co-operative Credit Societies (PACCS) are delivering the e-services. It has been proposed to establish 2,280 Common Service Centres additionally, out of which, a Letter of acceptance (LoA) has been given for setting up of 1,930 Centres in 18 Districts.

### 3.3 Urban Arasu Common Service Centres

Considering the usefulness of the Rural CSCs, the Scheme has been extended to urban areas. Urban Arasu

CSCs will function with the objective of providing unified access to e-services of different Government Departments at a common point in the urban areas of the State.

The Pilot for the Urban Arasu CSC Scheme was launched in Chennai by the Hon'ble Chief Minister of Tamil Nadu on 24.02.2014 in the following 14 places :

Taluk Offices	–	3
Corporation of Chennai (Zonal Offices)	–	3
Chennai Metro Water Supply & Sewerage Board (CMWSSB) (Depots)	–	2
Urban Co-operative Credit Societies	–	6

In the second phase of this scheme, more than 300 Urban Arasu CSCs have been proposed to be established across all urban areas of the State.

### 3.4 State Portal / State Services Delivery Gateway (SSDG)

The State Portal is a one-stop access to Tamil Nadu Government Information and e-Services. The State Portal provides features like integration of e-District services, Content Management System, links to all

Department services, mobile compliance, citizen registration etc. The Portal has been tested thoroughly by STQC for functionality, performance and Security. This was inaugurated by Hon'ble Chief Minister on 24.02.2014.

### **3.5 Capacity Building**

Capacity Building Scheme aims to develop IT expertise and skills at various levels of Government to achieve the following :

1. Bringing standardization and consistency across initiatives
2. Change Management and training requirements
3. Government Process Reengineering
4. Optimizing cost and resource utilization
5. Leveraging external resources
6. Implementing best practices followed elsewhere.

As part of the Capacity Building, the following Courses / Training programs are undertaken by TNeGA for the benefit of Government employees:

- Basic IT orientation Training
- e-District Application Training

- E-Governance Orientation Training
- Specialized Training on e-Governance (STeP) Program
- Soft Skills Training
- Hardware and Networking Courses
- Database Management Courses
- Internet Protocol version 6 (IPv6) Training
- Change Management Training
- Government Process Engineering Training
- Project Management Courses
- Application Software Training

So far, 34,244 Government employees have been given various types of training. The following chart describes the Training programmes conducted by TNeGA from the year 2009 to May 2014 :

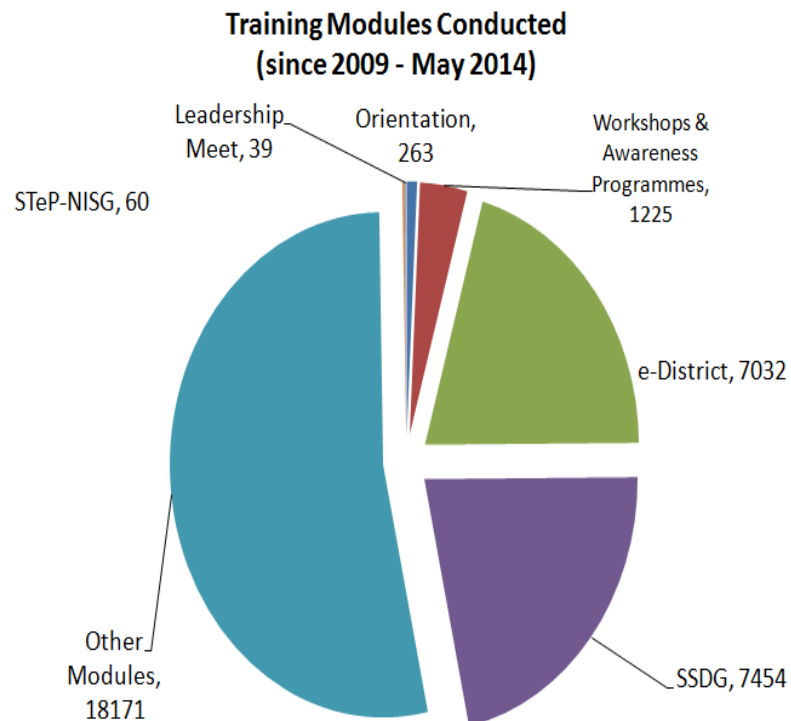


Figure - 3

During 2013-14, 2,566 Government officials have been trained on e-District application Software and 65 officials have been given specialized training on IPv6 awareness.

In addition to the above training programmes, a State Level Awareness Workshop on National e-Governance Plan was conducted on 27.08.2013 in which 135 officials participated.

### 3.6 Tamil Nadu Geographical Information System (TNGIS)

In order to create a repository of digital maps, a sum of Rs.1,32,80,000/- has been sanctioned. This Repository of Digital Maps will have standardized State level and District level Geographical Information System (GIS) applications. The Maps (Multi-user licensed Spatial Data) procured by Tamil Nadu Road Sector Project (TNRSP) will be used as the base map for this programme. The Digital Map Repository will be shared across all the Government Departments for their use.

### 3.7 State Resident Data Hub (SRDH)

Government have issued orders approving the creation of a State Resident Data Hub (SRDH). SRDH will create biometry based citizens database from NPR data with the identity being validated through the AADHAAR

Number issued by Unique Identification Authority of India (UIDAI).

The SRDH database can be used by Government Departments / Agencies / Undertakings for seeding of AADHAAR numbers, cleansing, de-duplication and organizing data in their databases efficiently.

The SRDH aims to enable the States to :

- Manage complete State Level Resident Data in a digitized, centralized and secured manner.
- Utilize AADHAAR number to uniquely identify the beneficiaries for different schemes implemented by State Government.
- Integrate AADHAAR enabled NPR data with Department utility Databases on real time.
- Incorporate AADHAAR authentication into various applications.

The deployment of the SRDH application framework in the State Data Centre would create an authentication infrastructure using NPR/ AADHAAR data.

This project will be implemented at an estimated cost of **Rs. 25.93 crores**.

### **3.8 Facilitation for Mission Mode Departments**

The Government Departments have been implementing e-Governance projects for the past few years. For delivering of services to the citizens, the Government of Tamil Nadu has prioritized the services of 15 Departments as State Mission Mode Departments (MMDs). The Information Technology Department is facilitating these Departments with support infrastructure namely, Tamil Nadu State Wide Area Network (TNSWAN) and Common Service Centres (CSC) for enabling electronic delivery of services.

ELCOT and TNeGA are involved in providing technical guidance and project implementation support for the Mission Mode Departments. The support activities being carried out in some of the Mission Mode Departments are given below.



Sl. No.	Projects	Current Status
1.	Agriculture (AGRISNET)	<p>1) Farm Crop Management System (FCMS) is being implemented. It is in Operation &amp; Maintenance and Enhancement Phase.</p> <p>2) Online Billing of sales of Fertilizers, Pesticides Seeds &amp; Farming equipments at Block level. Real time beneficiary monitoring at Chennai Headquarters.</p>
2.	e-District	<ul style="list-style-type: none"> <li>Out of 37 services, 19 services have been developed and delivered across Tamil Nadu in 32 Districts. (5 Revenue Certificates and 6 Social Welfare Schemes, 8 services covering Adi Dravidar and Tribal Welfare, BC, MBC &amp; DNC under Scholarship schemes).</li> </ul>
3.	Employment (tnvelaivaippu)	<ul style="list-style-type: none"> <li>Online Employment Portal automating 48 Employment</li> </ul>

		<p>Exchanges has been developed and rolled out across Tamil Nadu.</p> <ul style="list-style-type: none"> <li>The 10<sup>th</sup> and +2 students Database pertaining to more than 7 Lakh students has been imported and integrated into “<b>tnvelaivaippu</b>” database after publication of 10<sup>th</sup> and +2 results.</li> </ul>
4.	Land Records (NLRMP)	<ul style="list-style-type: none"> <li>Work related to creation of Land Record Management Centres (LRMC) has been completed in 6 Taluks of Kancheepuram district and 5 Taluks of Tirunelveli district. Supply of Computers and accessories, furniture, etc. is in progress for these 11 LRMCs</li> <li>Further, work is in progress in 4 Taluks of Kanyakumari District.</li> <li>Action to be pursued for constructing LRMCs in the</li> </ul>

		<p>remaining Taluks of Kancheepuram and Tirunelveli districts and also in 57 more Taluks all over the State.</p> <ul style="list-style-type: none"> <li>• Data entry of 1.35 Crore Natham land records and 37 Lakh Urban land records is in progress.</li> <li>• NLRMP Training Cell with all modern facilities / instruments has been established at the Survey Training Institute, Orathanadu.</li> </ul>
5	Commercial Tax (End to End Total Solution)	<ul style="list-style-type: none"> <li>• Consulting Agency and System Integrator have been selected for implementing an End to End Total Solution to Commercial Taxes Department.</li> <li>• Development of applications is under process.</li> </ul>
6	Municipalities	<ul style="list-style-type: none"> <li>• Centralized e-Governance Application for Urban Local Bodies (ULBs) is proposed.</li> </ul>

		<ul style="list-style-type: none"> <li>• System Integrator has been identified. Prototype under Development.</li> </ul>
7	Panchayat Raj (e-Panchayat)	<ul style="list-style-type: none"> <li>• 14 Applications have been developed by NIC, Delhi and the same will be customized as per State's requirement.</li> <li>• PRIA Soft Application is implemented in 32 Districts across the State and implementation of Plan Plus application in 6 districts, is under progress. (Real time beneficiary monitoring of the on-line billing at Chennai Headquarters.)</li> </ul>
8	Police (CCTNS)	<ul style="list-style-type: none"> <li>• Crime &amp; Criminal Tracking Network System - State wide rollout was completed on 26th September 2013.</li> <li>• Enterprise Management System (EMS) is a Monitoring tool for the State Data Center (SDC) Servers and CCTNS infrastructure at Police Stations and Higher Offices. EMS</li> </ul>

		<p>Commissioned and EMS Help–desk operation commenced from 1<sup>st</sup> Feb 2014. The CIPRUS application meant for registering complaints, has been developed and implemented in all Police Stations of the State.</p> <ul style="list-style-type: none"> <li>Phase – II commenced from 1<sup>st</sup> April 2014 and development of Citizen Portal commenced for new workflow for online complaint and other services.</li> </ul>
9	Transport Department (Vahan & Sarathi)	<ul style="list-style-type: none"> <li>The development involved the implementation of two software applications - <b>VAHAN</b> for vehicles registration activities and <b>SARATHI</b> for driving license related activities.</li> <li>Project on-going (Live).</li> </ul>
10	Treasuries & Accounts (IF&HRMS )	<ul style="list-style-type: none"> <li>Tender is under process for Selection of System Integrator.</li> </ul>
11	Health & Family Welfare - (HMIS)	<ul style="list-style-type: none"> <li>The Health and Family Welfare Department has implemented Health Management</li> </ul>

		<p>Information System (HMIS) in 267 Hospitals and 1,613 Primary Health Centres to update health records. More than 10,000 hospital users are operating the system. Primary Health Centres are reporting on Monthly MIS Reports.</p> <ul style="list-style-type: none"> <li>Phase-III will be implemented in Tertiary Hospitals, Government Medical Colleges including Dental Colleges in Urban areas.</li> </ul>
12	School Education (EMIS)	<ul style="list-style-type: none"> <li>The GIS mapping clubbed with the Education Management Information System (EMIS) will help the department to keep a track of not only the schools, but also every school going child. The pilot programme has been initiated in five schools in Tiruchirappalli District.</li> <li>Tamil Nadu will be the first State in the Country to integrate the GIS mapping with the</li> </ul>

		Education Management Information System (EMIS).
13	Civil Supplies & Consumer Protection -	<ul style="list-style-type: none"> <li>An Integrated solution for Public Distribution System is being proposed.</li> <li>RFP for Selection of System Integrator is under Process.</li> </ul>
14	Industries (MSME Department)	<ul style="list-style-type: none"> <li>The online service for filing of Entrepreneur Memorandum Part-I &amp; II has been introduced mainly to help the entrepreneurs to obtain the acknowledgement without contacting the District Industries Centres.</li> <li>Enhancement is in progress.</li> </ul>
15	Social Welfare – (Integrated Child Development Services)	<ul style="list-style-type: none"> <li>An end-to end solution called 'Integrated Anganwadi Management System (IAMS)' is being developed for the use of common citizens.</li> </ul>

## CHAPTER - V

### HIGHLIGHTS OF THE YEAR 2013-14

#### 1. Hon'ble Chief Minister's Award for Excellence in e-Governance for Government Departments

Government of Tamil Nadu announced that as a mark of recognition and encouragement, the Departments which strive towards e-Governance successfully will be awarded the "Chief Minister's award for Excellence in e-Governance" every year.

For the year 2012-13, nominations were received and awards were finalized for each category as follows :

Sl. No.	Category	Department / District Chosen for Award
1	Excellence in Government Process Re-Engineering	Directorate of Employment & Training (DET)
2	Outstanding Performance in Citizen centric service Delivery through innovative use of technology	Tamil Nadu State Aids Control Society (TANSAC)
3	District level e-Governance initiatives	Perambalur District

Table-3

## **2. Hon'ble Chief Minister's Award for Excellence in e-Governance for Students**

Government of Tamil Nadu announced that in order to create an awareness on e-Governance among the youth, students and e-Governance enthusiasts, a competition for development of innovative e-Governance software applications will be held every year and the winners will be honoured with the "Hon'ble Chief Minister's Award for Excellence in e-Governance for Students".

## **3. Facilitation for Government Departments**

The information Technology Department is facilitating support infrastructure like Tamil Nadu State Data Centre (TNSDC), Tamil Nadu State Wide Area Network (TNSWAN) and Common Service Centres (CSC) for enabling electronic delivery of services.

## **4. Online Demonstrative Services Directory**

Government of Tamil Nadu announced that an "Online Demonstrative Services Directory" will be created which will contain the name of the e-Services, Website

address, Links to the Services and a demonstrative user guide made available to the public. The software development has been done and the User Acceptance Testing has been completed.

## **5. Scheme Monitoring Software**

In order to measure the effectiveness of the schemes and to improve the delivery of the benefits to the public, a "Scheme Monitoring Application Software" has been announced. This tool will enable the Departments to review and monitor the progress of the schemes on a near real-time basis and help in decision making. The software has been developed and the User Acceptance Testing has been completed.

## **6. IT Security Auditing**

In order to protect the Government websites and IT applications from defacement and hacking, IT Security Auditing of the websites and IT applications is being conducted in a phased manner. ELCOT has empanelled Security Audit agencies and as of now Security Audit has

been completed in 20 departments' applications and websites developed by NIC.

### **7. E-Learning Content for Government Employees**

In order to improve employee's ICT skills and to expedite e-Governance implementations in the State, an online training software has been developed to implement e-learning solution. The software development has been done and the User Acceptance Testing has been completed.

### **8. e-Governance Initiative Fund**

To deliver various services of Government Departments through e-Governance, 14 Departments have been selected as Mission Mode Departments (MMDs) and these departments are being computerized. In order to support the non-Mission Mode Departments which intend to deliver integrated services through e-Governance, an e-Governance Initiative Fund has been created for encouraging their e-Governance measures. A sum of Rs.10 Crores (Rupees Ten crores only) has been earmarked for this purpose.

### **9. IT Cadre**

In order to support e-Governance initiatives within Government, an IT Cadre has been created under the Commissionerate of e-Governance for which 98 posts have been sanctioned. This IT Cadre would play a key role in managing implementation of IT Infrastructure projects and e-Governance programmes.

### **10. ICT Repository**

As of now, the Departments implement application software through Government Agencies and outsourced agencies. In cases where software implementation is done through an outsourced agency, over a period of time there is a lack of support/enhancement and source code and documentations are not traceable. In such conditions, the continuity of Department services would be affected. To overcome the above issue, it has been proposed to establish a centralized ICT Software Repository at a cost of Rs.17 lakhs for the Government. The software development has been done and the User Acceptance Testing has been completed.

### **11. SMS based Service Tracking Facility**

In order to utilize the mobile phone penetration in the State, the Government of Tamil Nadu has accorded administrative approval for a sum of Rs.1,20,50,000/- to enable the citizens to track the applications submitted through e-District Application using SMS facility.

### **12. Project Information Management System (PIMS)**

In order to monitor and control the project execution, it is very essential to gather, collate and report the project data from different projects across the Departments. It is also essential to measure the effectiveness of the Mission Mode Projects to achieve the goal of “Outcome based Approach” envisaged by the Government, to know the service level transactions of each project. To address these requirements, a centralized Project Information Management System has been proposed to be setup at a cost of Rs.22 lakhs .

### **13. Centre of Excellence (CoE) for Capacity Building**

To address the needs of Capacity Building in ICT skills and tools, the Government of Tamil Nadu has decided to establish a Centre of Excellence for Capacity building. This centre will address the growing need of ICT skilled manpower in the Government Departments that are implementing e-Governance projects to provide citizen centric e-services. This will act as a facility to enhance the Information Communication Technology skills of Government employees by creating capacity building in Information Technology.

The proposed CoE would be implemented by ELCOT in partnership with C-DAC (Chennai). ELCOT will provide IT and non-IT Infrastructure for C-DAC to create the Cloud environment so that the Technology Partners of CoE can deploy their software products to build and demonstrate the ICT skill capacity of the employees of Government Departments.

The core activities planned at the Centre of Excellence include :

- 1) To act as a knowledge repository
- 2) To provide a suitable environment for research and innovation
- 3) To act as a hub for knowledge sharing, transfer and dissemination
- 4) To provide training and building Capacity.

## CHAPTER - VI

### ACHIEVEMENTS FOR THE YEAR 2013-14

#### **1) eTaal**

eTaal is a web portal for dissemination of **e-Transaction** statistics of Central and State level Projects including Mission Mode Projects. It receives transaction statistics from web based applications periodically on near real time basis. Based on the statistics, the States / Projects are ranked on National Basis. After continuous efforts of TNeGA and with the coordination of several Government Departments, the State has been placed 2<sup>nd</sup> overall in e-transactions in the “State Government Projects” category, up from the 11<sup>th</sup> position last year.

#### **2) e-Districts**

33 Services have been identified under e-District Programme covering various Departments. So far, 19 Services are offered through e-District Programme. As on date, 7 Districts have fully rolled out the project in all



Taluks while the balance districts have programmes to do so during the current year.

The Number of Transactions made under the e-District Programme (As on 27.07.2014) for Revenue & Social Welfare e-District Services are given below.

<b>Sl. No.</b>	<b>e-District Programme – Transaction Details (As on 27.07.2014)</b>	<b>No. of Transactions</b>
1.	Revenue Services	21,52,130
2.	Social Welfare Services	46,442
3.	Utility Services	367
<b>Total Transactions</b>		<b>21,98,939</b>

Table-4

## **CHAPTER - VII**

### **ICT ACADEMY OF TAMIL NADU**

ICT Academy of Tamil Nadu (ICTACT) is a joint initiative of Government of India, Government of Tamil Nadu and Industries. ICTACT is a not for profit autonomous organization focusing on improving the quality of students graduating from various institutions in Tamil Nadu, to make them industry ready and immediately employable in the ICT industry.

ICTACT is governed by an autonomous Board of Governors with representations from the State Government of Tamil Nadu and the leading companies in the ICT industry. ICTACT is a pioneering venture under the Public - Private - Partnership (PPP) model that endeavors to train the college level teachers and students in the areas of Information & Communication Technology, thereby making the students industry ready.

During the year 2013-14, ICTACT has actively pursued the following initiatives:-

- Trained 1,630 Higher Education Faculty members from 650 institutions in the State benefitting one lakh graduating students.
- Conducted 70 Faculty Development Programmes.
- Assessed and certified 23,000 students on Basic Computer Course (BCC) as approved by Directorate General of Employment and Training (DGET), Government of India.
- Published 87 research articles in its 3 ICTACT Journals.
- Conducted 6 Industry-Institute Interaction Conferences (ICTACT Bridge) in 6 cities and conducted 47 Technical Seminars (ICTACT Power Seminars) for students across the state of Tamil Nadu.
- ICT Academy of Tamil Nadu has successfully completed 7 Government projects during the year 2013-2014.

- ICTACT has forged new partnerships and signed Memoranda of Understanding with leading ICT Companies NVIDIA and IBM, as part of its objectives.

● **Government Projects completed in 2013-14**

Having developed its training capabilities, ICT Academy has been servicing the Government Departments and providing training to its employees specifically in the areas of ICT and e-Governance. ICT Academy has been involved and is part of various Government Projects. Some of the projects undertaken for the Year 2013- 2014 are as follows :

<b>Sl. No.</b>	<b>Name of the Project</b>	<b>Department</b>
1	Basic Computer Course Training of ITI Students	Labour and Employment Department, Government of Tamil Nadu.
2	Training for 100 girls at Social Welfare Homes	Social Welfare and Nutritious Meal Programme Department, Government of Tamil Nadu.

3	Implementation of IT Skills training to 5,000 College students.	Tamil Nadu Skill Development Corporation, Labour and Employment Department, Government of Tamil Nadu.
4	Basic Computer Course assessment and certification.	Directorate General of Employment and Training (DGET), Government of India.
5	Soft Skills/IT Skills Training to 100 students	Tamil Nadu Institute of Labour Studies, Chennai, Government of Tamil Nadu.
6	Formation of 50 EDC under Entrepreneurship Development Institute, Chennai.	Entrepreneurship Development Institute, Micro Small and Medium Enterprises Department, Government of Tamil Nadu.
7	Evaluation Of Efficacy of Training Programme Under NEEDS scheme	Entrepreneurship Development Institute, Micro Small and Medium Enterprises Department, Government of Tamil Nadu.

## 2. ICTACT International Research Journals

ICT Academy of Tamil Nadu has been publishing three peer reviewed International Journals on quarterly basis : Journal on Communication Technology, Journal on Soft Computing, Journal on Image and Video Processing. The Index Copernicus Value (ICV) for ICTACT Journals is 5.09 for IJCT, 5.09 for IJSC and 5.09 for IJVP. ICT Journals are also indexed by Inspec, a major indexing database of scientific and technical literature, published by the Institution of Engineering and Technology (IET) and formerly by the Institution of Electrical Engineers (IEE).

## 3. ICTACT Conferences, Conclaves and Seminars

During 2013-14, ICT Academy has conducted 6 ICTACT BRIDGE conferences in Chennai, Coimbatore, Madurai, Trichy, Tirunelveli and Salem. ICTACT has conducted 47 power seminars for students.

## 4. ICTACT New Initiatives for 2014-15

ICT Academy has taken various new initiatives for the year 2014–15. The initiatives are as follows:-

#### **4.1. New Government Projects for 2014-15**

- 1) Training of 14,000 Government ITI Students on Basic Computer Course (BCC) through Tamil Nadu Skill Development Corporation, thereby making them digitally literate.
- 2) Training of 2,000 unemployed youth on BFSI Sector skills, thereby making them employable in BFSI Sector through Tamil Nadu Skill Development Corporation.
- 3) ICT Academy of Tamil Nadu facilitates IT Skills of Trainers at 44 ITI's across Tamil Nadu through Department of Employment & Training.
- 4) ICT Academy is undertaking training of 100 girls in 5 Social Welfare Homes on IT Literacy & Soft Skills through Directorate of Social Welfare.

#### **4.2. School Initiatives**

ICTACT is starting its services to the schools, and will be implementing a range of training programs with focus on enhancing the skill-set of teachers in the K-12

sector. ICT Academy of Tamil Nadu will contribute to School Empowerment through its training, services, events, workshops, competitions etc for the school teachers and students, thereby benefitting the students at the schools.

#### **5. Sky Campus**

The broad purpose and scope of Sky Campus is to bring quality academic and career support to the public and ensure success in the 21st century. The Sky Campus will be a complete platform to run a MOOC (Massive Open Online Course) and can be used by Schools, Colleges, Universities and the public to undergo skill development courses.

#### **6. ICTACT Youth**

ICTACT is starting ICTACT Youth, an initiative to enhance Employability Skills in students and make them industry ready which has become an important issue. ICTACT Youth will address specific issues relating to communication and leadership skills among students, which have been the gaps identified by the Industry.

## **CHAPTER – VIII**

### **TAMIL VIRTUAL ACADEMY**

Under ICTACT Youth, ICTACT has launched two first of its kind student competitions ICTACT Youth TALK and ICTACT Youth PRESENT, in our state which will be conducted every year, to nurture and develop the communication, presentation and leadership skills among students.

The ICT Academy will be organizing “ICTACT Youth Summit” a first of its kind annual summit focussed on the youth community and specific to college students.

ICTACT is forming ICTACT Youth Circle in colleges with the objective of enhancing the communication skills of graduating students and providing them a platform to practise public speaking.

The ICTACT Youth Circle’s mission is to help students to improve speaking, listening and thinking skills, through a relaxed, friendly and supportive environment. Every member has the opportunity to develop communication and leadership skills, which in turn foster self-confidence and personal growth.

#### **1. Introduction**

The Tamil Virtual University (TVU) was established as a Society by the Government of Tamil Nadu on 18<sup>th</sup> May 2000 to provide Internet-based resources and opportunities to the Tamil Communities living in different parts of the Globe, as well as others interested in learning Tamil and acquiring knowledge of the History, Art, Literature and Culture of the Tamils. The Tamil Virtual University has been renamed as Tamil Virtual Academy.

#### **2. Organisational Setup**

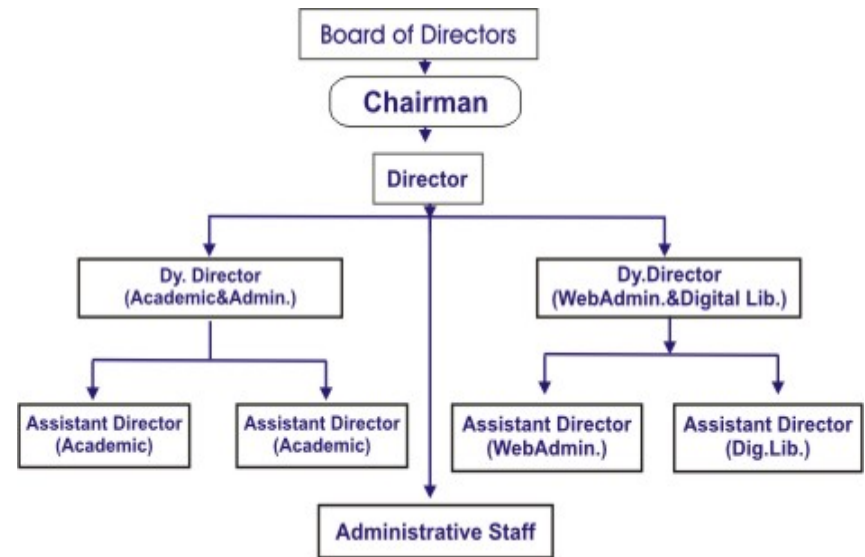
Tamil Virtual Academy is working under the Information Technology Department of Tamil Nadu Government.

The Board of Tamil Virtual Academy has been reconstituted recently, under the Chairmanship of the

Secretary to Government, Information Technology Department, and with the following 8 Board Members :

- Vice Chancellor, Tamil University, Thanjavur
- Secretary to Government (Expenditure), Finance Department
- Principal Secretary to Government, Higher Education Department
- Principal Secretary to Government, School Education Department
- Secretary to Government, Tamil Development and Information Department
- Managing Director, Electronics Corporation of Tamil Nadu Limited
- Director, Tamil Development Directorate
- Director, Tamil Virtual Academy

The organisational structure is shown below :



### 3. Vision

The Tamil Virtual Academy aims at providing Internet-based resources and opportunities for the Tamil communities living in different parts of the Globe as well as others interested in learning Tamil, Tamil Computing software and acquiring knowledge of the history, art, literature and culture of the Tamils and to identify, establish, maintain and promote solutions for the Tamil computing requirements of Tamil Diaspora, Government, Educational, Media and Business institutions.

#### **4. Mission**

- To develop Tamil Computing solutions.
- To develop and deliver Internet based learning material on Tamil language, literature and culture to Global Tamil Communities and others interested.
- To develop and deliver customised programmes to meet the cultural needs of the Tamil Communities in different parts of the world and help them retain contact with their heritage.
- To initiate and continue necessary measures to co-ordinate and pool together knowledge resources, developed in Tamil in different parts of the world, to ensure wider dissemination.
- To offer academic programmes in Tamil Language, literature and culture for audit or credit and to award appropriate Certificate / Diploma / Degree through Tamil University, Thanjavur on completion of prescribed requirements.

#### **5. TVA Activities**

- **Academic Programmes**

Academic activities are developed by TVA and administered from basic levels to Research level.

- **Tamil Computing**

To carry out fundamental research and develop a data base required for Tamil Software Development.

- **Digital Library**

To Develop Digital Library for students and others.

- **Tamil Software Development**

To develop Tamil software through Tamil Software Development Fund (TSDF), provided by Government of Tamil Nadu and to test and certify software developed by others.

- **Documentation and Archiving of Tamil Art & Culture**

Tamil cultural activities are documented and uploaded in the web for Dissemination and Knowledge sharing

## 6. Academic Programmes

At present, Tamil Virtual Academy is offering Academic Programmes like Primary Education, Certificate Course, Diploma, Higher Diploma and Degree (B.A. - Tamilology).

Primary Course	Certificate Course	Hr.Certificate	Degree
Introducing Alphabets and Rhymes for Beginners	Basic (1-2 Std)	Grade-1 (7-8 Std)	Diploma
	Intermediate (3-4 Std)	Grade -2 (9-10 Std)	Higher Diploma
	Advanced (5-6 Std)	Grade -3 (11-12 Std)	Degree (B.A. Tamilology)

## 6.1 Registered Students

14,245 candidates from 70 Countries have registered for different courses and 3,673 certificates, 54 higher certificates, 250 Diplomas and 137 Higher Diplomas and 132 Degrees were awarded so far.

## 6.2 Study Centre

68 Study Centres in 18 countries are providing TVA Academic programmes.

## 6.3 CD's for Students

TVA has released CD's for Primary, Basic, Intermediate and advanced level lessons, Learn Tamil, Tamil Karpom, Thirukkural, Technical Glossary for the benefit of students and others.

## 6.4 Virtual Class Room

In virtual class room, Prof. M.Nannan teaches Tamil through Tamil under the caption, "Tamil Karpom" in 39 lessons. Prof. T.B. Siddhalingiah teaches Tamil through English in 81 lessons. Mr.Samicannu teaches Tamil through French in 19 lessons.



Moreover, video lectures by Thiru. Kavikko Gnanaselvan, Thiru.S.Krishna Chand Chordia, Dr.P.S.Yesudasan and Dr.J.R. Lakshmi are also available for degree students. All these lectures are available in TVA website and as C.Ds.

## 7. Tamil Computing

- Tamil Virtual Academy has established a Tamil Computing Lab for research and development in the area of Tamil computing. Now the Projects on **“Annotated Corpus for Tamil Literature”**, Speech Database, **“Syntactically and Semantically Annotated Corpus”** for Tamil and **“e-Dictionary for Tamil”** with pronunciation, are under progress in this lab. These projects aim at creating a Tamil database required for developing Tamil Software.
- The Government of Tamil Nadu has declared Unicode and TACE-16 as its standards. Now, the Tamil keyboard interface and Tamil fonts have been uploaded in TVA website for public use.

- Now TVA is setting up a Tamil Software Incubation Centre for providing a base for development of Tamil Software. Government of Tamil Nadu sanctioned Rs.45.00 lakhs during 2013-2014 for this project.
- The TVA is coordinating with Government of Tamil Nadu on matters related to Tamil Computing and Unicode.
- In this respect, The Tamil Virtual Academy has organised a one day seminar on **'Tamil in Unicode – Requirements and Solutions'** on 05.03.2014 at TVA. The topics covered in the seminar are:
  1. Tamil Fractions and Symbols - Naming and Glyphs
  2. Tamil All Character Encoding (TACE-16)
  3. One India / One Script Proposal
  4. Enforcement of Encoding & Keyboard Standards in Government
  5. Tamil in Modern Devices

To resolve some of the above issues, steps have been taken for constitution of a high-level committee as suggested by the seminar and due recommendations will be submitted to the Government.

## 8. Digital Library

- The Digital library of TVA is developed for the benefit of students and others. It includes Literature, Dictionaries, Glossaries, Tamil Encyclopedia, Cultural Gallery and Manuscript Gallery.
- Now 2,700 books covering entire gamut of Tamil literature starting from Sangam Era are available.
- The distinct advantage of this digital library is its elaborate subject indexing and search facilities.

## 9. Tamil Software Development

- Tamil OCR, Tamil Handwriting OCR, Electronic Dictionary, Tamil Corpus Analysis, Intelligent Information Retrieval of Thirukkural in Handheld

Devices are some of the Tamil software developed under TSDF.

- Predictive Text Software Design for Tamil is ongoing.
- Further, many more Tamil Software products will be developed under TSDF.

## 10. Documentation and Archiving of Tamil Art & Culture

- Tamil Virtual Academy has organised a one day Workshop on 28.04.2014 on the topic: "**Web-enabling Tamil History, Culture, Art and Literature**". Based on the recommendations of this workshop, an Expert Committee will be set up to guide TVA for coordinating with Government departments for collecting, documenting and web enabling features of art and culture of Tamil Nadu.

## 11. Infrastructure

- Construction of the Tamil Virtual Academy Building works was completed fully. TVA is functioning in

this building from 01.05.2011. Now the Auditorium and Studio work have been completed.

## 12. Other Activities

- About 2,50,000 technical terms compiled by various Universities have been grouped according to subjects and published in 14 volumes. All the 14 volumes are available in a single CD.

## CHAPTER – IX

### TAMIL NADU ARASU CABLE TV CORPORATION LIMITED (TACTV)

#### 1. Introduction

The Incorporation of Arasu Cable TV Corporation was done on 04.10.2007 with the objective of providing high quality cable TV signals to the public at an affordable cost. Digital Head Ends were commissioned at 4 places viz., Thanjavur, Tirunelveli, Coimbatore and Vellore. Due to various reasons thereafter, the Corporation became defunct.

The Hon'ble Chief Minister of Tamil Nadu, after assuming office in May 2011 has revived and revamped Arasu Cable TV Corporation and renamed it as **Tamil Nadu Arasu Cable TV Corporation Ltd (TACTV)**. The Hon'ble Chief Minister of Tamil Nadu made an announcement on the floor of the Assembly on 30.08.2011, that Tamil Nadu Arasu Cable TV Corporation would provide quality services at an affordable cost with Rs.70/- being the monthly subscription payable by the

subscribers to the Cable TV Operators of which Rs.20/- would be paid to Tamil Nadu Arasu Cable TV Corporation per month per subscriber by the Cable TV Operators.

The Hon'ble Chief Minister of Tamil Nadu inaugurated the Cable TV services all over Tamil Nadu (except Chennai) on 02.09.2011.

## 2. Vision

Tamil Nadu Arasu Cable TV Corporation was revived with a vision to provide quality services to the public at an affordable cost.

## 3. Background and growth

Before the advent of TACTV Corporation, the Cable TV sector in Tamil Nadu was totally unorganized, with very few Multi System Operators in the field, and the Local Cable Operators as well as the public were forced to pay exorbitant amount as subscription fees. The public were paying Rs.150 to Rs.250 to the Local Cable Operators to avail the Cable TV services.

The revival and revamping of TACTV Corporation has helped to provide quality Cable TV services at an affordable cost of Rs.70/- per month. At present TACTV Corporation is transmitting 90-100 Channels, including Free-to-Air Channels, Pay Channels and Private Local Channels.

The service being provided by the TACTV Corporation is a welfare step taken by the Government in the interest of the public and Cable TV operators. The response from the Local Cable Operators and the public is overwhelming and more and more cable operators and the general public have started to come into the fold of TACTV Corporation and are using its signals. This is evident from the fact that the **subscriber base** of TACTV Corporation which was **4.94 lakhs on 02.09.2011 has risen to 70.52 Lakhs** connected through 26,246 Local Cable Operators **as on 15.07.2014.**

## 4. Infrastructure

Tamil Nadu Arasu Cable TV Corporation has established additional infrastructure by taking the Head Ends of willing erstwhile private Multi System Operators

(MSOs) in 27 Districts on lease apart from revamping its existing Digital Head Ends in four Districts. Thus, as on date, TACTV Corporation has under operation 63 Head Ends including those taken on lease from the erstwhile MSOs. TACTV Corporation has established connectivity to 26,246 Local Cable Operators from these 63 Head Ends across the State.

## **5. Organization Structure**

TACTV Corporation is headed by a Chairman and a Managing Director. There are two General Managers in the cadre of District Revenue Officer supported by two Managers in the cadre of Deputy Collector to manage the entire operations in the State. There are 5 Deputy Managers and 14 section assistants working in the Head quarters. Each District has one Deputy Manager in the Cadre of Tahsildar who is supported by a Revenue Inspector, one Technical Assistant and 3 Assistant Technicians. The technical wing is headed by a Chief Technical officer and the Finance wing is headed by a Financial Adviser & Chief Accounts Officer.

## **6. Inauguration of Cable TV Services in Chennai**

The Hon'ble Chief Minister of Tamil Nadu inaugurated the Cable TV Services of TACTV Corporation in Chennai Metro on 20.10.2012. TACTV Corporation is now providing Analog and Digital signals to the Local Cable Operators in Chennai Metro Area.

## **7. Digitalization background**

The Government of India, Ministry of Information & Broadcasting in the Ref.No.9/32/2007-BP&L dated 02.04.2008 issued Multi System Operator License to the Tamil Nadu Arasu Cable TV Corporation in the Conditional Access System (CAS) areas of Chennai Metro. As per the Cable TV Network Amendment Act, 2011, the entire Cable TV Services in the Country are to be digitalized within a time frame i.e., by 31.12.2014. In the first phase, four Metros including Chennai were to be digitalized on or before 31.10.2012. TACTV Corporation applied for MSO License for the DAS notified areas of Chennai Metro on 05.07.2012 and on 23.11.2012 for the Rest of Tamil Nadu both of which are pending with the Ministry of Information & Broadcasting (MIB), Government of India.

## **8. 'Digital Addressable System' (DAS) License for Chennai**

The issue of MSO License for the DAS notified areas of Chennai Metro is pending with Ministry of Information & Broadcasting, Government of India. The Ministry referred the matter to Telecom Regulatory Authority of India (TRAI). The Government of India has formed an Inter-Ministerial Committee (IMC) on 03.01.2013 to look into the recommendations of TRAI and the IMC has not yet submitted its report.

The Hon'ble Chief Minister of Tamil Nadu had written to the then Hon'ble Prime Minister of India on 16.12.2012 requesting to advise the Ministry of Information & Broadcasting to issue DAS License to TACTV Corporation. Further, the Madurai Bench of Hon'ble Madras High Court in W.P. No.11649 of 2012 had given an interim order dated 06.12.2012 that *"the process of issue of license to the respondent (TACTV) may go on and license may also be issued. But issue of license is subject to the outcome of the writ petition"*.

The Hon'ble Madras High Court has also directed the Ministry of Information & Broadcasting to immediately take a decision upon TACTV Corporation's application for DAS license dated 05.07.2012.

Hon'ble Chief Minister met Hon'ble Prime Minister on 03.06.2014 and presented a memorandum in which the issue of DAS license to TACTV Corporation was among the points highlighted.

## **9. Steps taken by TACTV for Digitalization in Chennai**

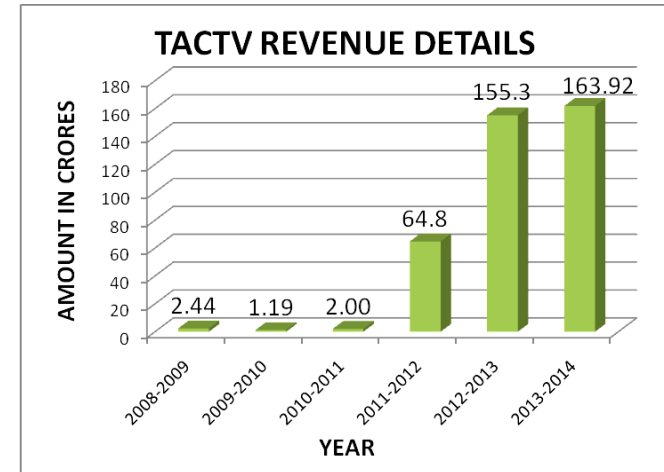
TACTV Corporation has taken steps to digitalize the Cable TV Services in Chennai Metro and in order to do this, TACTV Corporation had floated a Tender for supply, installation, testing and commissioning of Digital Cable TV Head End with Conditional Access System (CAS), Subscriber Management System (SMS) and 10 Lakh Set Top Boxes (STBs) on rate contract basis for one year on 25.09.2012. Orders were placed and an initial lot of 50,000 Set Top Boxes were procured. Out of this, 20,000 Set Top Boxes have already been distributed to 350 Local Cable Operators. TACTV Corporation has

invested Rs.20.72 Crore towards upgradation of Digital Control Room, purchase of Set Top Boxes, CAS, SMS and other items required for establishment of Control Room at Chennai.

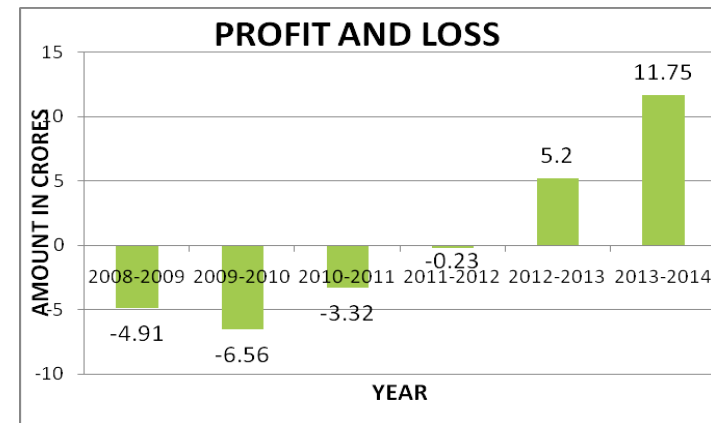
TACTV Corporation is providing 90-100 Channels with quality and clarity to the subscribers in Chennai Metro Area through the Local Cable Operators at an affordable cost of Rs.70/- per month. At present, TACTV Corporation has connected 3.40 Lakhs subscribers through 820 Local Cable Operators in Chennai Metro Area.

### 10. Financial performance of TACTV

TACTV Corporation was started with Government's share capital of Rs.25 Crore. TACTV also received Rs.33 Crore from Government as Term Loan. TACTV's revenue has increased from Rs.2.44 Crore in the year 2008-09 to Rs.163.92 Crore (Unaudited) in 2013-14.



TACTV was incurring loss till 2011-12 to the tune of Rs.15.02 Crore and subsequently TACTV increased its subscriber base and tapped revenues from Private Local Channels resulting in profit for the year 2012-13 and 2013-14.



TACTV Corporation has reached the breakeven level in 2013-14 and will improve the net profit for the year 2014-15.

### **11. Performance in 2013-14 : Highlights**

TACTV Corporation has achieved a net profit for the first time after its inception during the financial year 2013-14 after wiping out the accumulated losses of previous years. Several steps were taken to increase the revenue from all the sources the most important of which was increasing the subscriber base which was 62.31 Lakhs (as on 01.04.2013) to 65.93 Lakhs at the end of the financial year 2013-14. Further, revenue was also generated by giving allotment orders to more Private Local Channels selected through Tender cum Auction process and also through inviting Expression of Interest. 452 allotment orders were issued to Private Local Channels in the year 2013-14 alone. As a result, TACTV Corporation is carrying 706 Private Local Channels in the State. Further, TACTV Corporation was paying Rs.15.78 Crore towards broadcaster's subscription fee amounting to Rs.189.36 Crore per annum but the annual receipts were around

Rs.163.92 Crore resulting in a huge deficit. Hence, TACTV Corporation has taken expenditure control and revenue augmentation measures leading to savings to the tune of Rs.38.40 Crore from the Pay Channel Broadcasters for the year 2013-14. All the above said measures have made TACTV Corporation attain a net profit of Rs.12.02 Crore (unaudited) for the year 2013-14.

**Mukkur N. Subramanian**  
**Minister for Information Technology**