

Synopsis: C.Umashankar IAS (Tamil Nadu-1990)
umashankarc@gmail.com

Accessibility – visually challenged (2007)

Government of Tamil Nadu wanted to provide computer screen reader software to the Blind Schools under its control and deposited Rs.5 lakhs with ELCOT (A Government of Tamil Nadu undertaking which is the State nodal agency for Information Technology promotion and IT product procurement). This sum was meant for procuring 5 licensed copies of a proprietary screen reader software. ELCOT, instead of procuring the proprietary software looked for free and open source software and found out ORCA. A visually challenged resource person (Mr.Krishnakant Mane) flew down from Mumbai and showcased ORCA's supremacy over proprietary software.

ELCOT invited all the teachers from the Blind Schools across the State and conducted 3 orientation programmes to them under its corporate social responsibility. The visually challenged teachers picked up not only the operation of the ORCA software but also other tools such as typing skill, Open office-writer, open office spreadsheet and browsing the internet.

Instead of supplying the 5 proprietary screen reader licences, ELCOT supplied 20 fully loaded desktop computers pre loaded with ORCA.

ORCA, which is a free and open source software speaks multiple languages including all major Indian languages. No proprietary software does this.
www.youtube.com/nmdelcot

Computer education in schools: (2006-2008)

The Government of Tamil Nadu wanted to provide computer orientation to the students of all the 2300 high schools and 6600 middle schools. It chose linux as operating system. Over 40000 desktop and 12000 laptop computers were supplied to these schools with linux operating system and a host of other useful GNU software, including open office, tux typing tutor, Google map etc. ELCOT which supplied these computers also provides hand holding training in the districts. It has set up a 25 linux laptop training centre in each and every district collectorate to enable this.

The cost saving is over 60% as compared to the systems pre installed with proprietary operating system and office suite. As a result, the Government of Tamil Nadu could take an easy decision to procure the largest number of computers for all its schools.

With the original cost less than half the students would have been covered.

Chennai corporation adopting free Local Body ERP software: (2008)

Chennai corporation wanted to automate all its operations deploying e-governance software. It approached ELCOT for consultancy. ELCOT identified and evaluated a free and open source software that is being promoted by a Bangalore based non profit organisation. It persuaded the Government to accept this software for implementation. The Government paid only the implementation charges. The software is free to be deployed in all the 155 Municipalities and 10 Municipal corporations. This ERP software is built on Postgresql database (FOSS database). It also has Open GIS front end for street and city mapping. Open GIS is yet another free and open source software (FOSS).

At the cost of paying only the implementation charges for Chennai corporation (Rs.100 lakhs), the Government of Tamil Nadu enabled itself to implement the same ERP software all over the State.

E-procurement portal implemented with linux compliant digital signature tokens. (2008)

ELCOT was entrusted with the task of implementing e-tender portal. It went ahead with the tender process for procuring the e-tender portal software compatible for Linux server. ELCOT found a hiccup in the

form of non availability of digital signature tokens to work on linux servers and desktops. It called the digital signature providers to carry out the changes. Finally TCS and NIC came forward with a Linux version. ELCOT finalised the tender for the e-procurement portal to be owned and operated by ELCOT for Rs.3 crores (US \$ 600000). TCS supplied the linux compliant digital signature tokens. As Government did not come forward with funding, ELCOT went ahead and implemented the linux powered e-procurement portal on per tender charges (Rs.7500 per tender flat rate)

Computer hardware procurement:Linux compliance made mandatory (2006)

ELCOT is one of the largest IT hardware procurement agency in the country. It procures over 50000 desktops, 10000 servers, 5000 LCD projectors and a host of printers and other peripherals. It made linux compliance to all its procurements. The products which were not Linux compliant were not allowed to take part in the price bid. As a result, all the computer and peripheral manufacturer was enabled to provide linux drivers which in turn were made available in ELCOT's website for free download. These drivers were also made accessible to OEMs and OS builders thus enabling the entire global audience to enjoy the pre built Operating System. The disability associated with the new operating system was neutralised in this way. There was little resistance from the vendors in the beginning. But quickly they fell in line.

Computer hardware technology neutral: (2007)

ELCOT after evaluating Intel and AMD processors decided to do away with naming of processors but prescribe the performance rating through bench mark tests. Thus an equal opportunity was given to Intel's rival AMD in ELCOT's purchase operations.

Deployment of Postgresql database for e-governance: (2007)

ELCOT was asked to implement e-governance projects. It had to identify a suitable database. A popular database vendor quoted a licence price of Rs.25 lakhs per dual processor server. The cost of a dual processor fully loaded server was less than Rs.1.6 lakhs. ELCOT had to deploy over 100 servers. ELCOT decided to switch over to Postgresql (www.postgresql.org) database. The existing family card database was moved to the new database. New servers were procured and the project was successfully implemented. With the cost saving, ELCOT built a powerful data centre at a cost of Rs.12 crores, supported by two enterprise class IBM mainframe servers (Z9) powered by Linux.

The family card software is used through TN-State Wide Area Network online all over the State.

Implementation of TN State Wide Area Network on Linux/Solaris platform: (2006-07)

The 708 location, Rs.200 crore TNSWAN project was implemented on Linux / Solaris platform, thus proving that an enterprise wide network can be commissioned without proprietary operating system support.

Free Tamil fonts on the web (with linux compliance)

ELCOT procured Government standard Tamil fonts from its funds and hosted it for free download in its website (www.elcot.in). These fonts and tools can be operated in Linux and proprietary operating systems.

Wireless mesh networking for last mile connectivity (Operating System neutral)

ELCOT wished to adopt a highly robust last mile connectivity technology and identified the wireless mesh technology as suitable. It configured a tender that enabled to procure Linux and Windows compliant wireless mesh radios and control software. Thus alternative operating systems were not put to disadvantage.

Platform independent hand held device for fair price shops and ATM for cooperative banks: 2008

ELCOT got developed a cost effective GSM enabled hand held device substituting a host of equipment such as computer, UPS, networking, Printer etc at the fair price shop level. This is a cost effective OS independent hand held device. The equipment with built in printer and 4 hour battery back up was finalised for Rs.5750 each with 3 year warranty. All tests were carried out using Linux server. Deployment commenced during April 2008.

ELCOT as software development agency:

ELCOT set up its own software development facility deploying a host of software development tools such as Sun's Netbeans (Integrated Development Environment), Postgresql database, Jasper report for pdf report generation, Jboss for deployment, Subversion for version control, Mantis for bug fixing – quality control etc. The source code belongs to Government and can be shared with other departments and Governments. ELCOT also adopted a common geographical and technical standard in the development of the software. The ELCOT produced common tools and technologies are accessible to other departments now. In due course it will be made accessible to all Governments free of cost.

Supply of Linux notebook computers to IAS officers in Tamil Nadu

ELCOT proposed a new scheme to supply Linux notebook computers to all IAS officers of Tamil Nadu. Government accepted the same and ELCOT supplied the Linux notebook computers to all Tamil Nadu cadre IAS officers during 2007.

Data card to be OS neutral:

ELCOT had to supply internet data card to all the IAS officers of Tamil Nadu cadre. It also had to supply over 5000 cards to schools. It evaluated only the data cards which were made compatible for Linux and Windows and finalised the contract. As a result, Tamil Nadu officers get platform independent Internet data cards.

Linux training to IAS officers and their family members:

ELCOT, after supplying Linux notebook computers to the IAS officers of Tamil Nadu, conducted one exclusive training programme to the IAS officers in the Secretariat. This was followed by a Linux training in the housing complex of the IAS officers to benefit the IAS officers and their family members.

360 seater Linux Training centre in Chennai and 25 seater centre in each Collectorate:

With a view to providing training to Government officials, including IAS officers and teachers, ELCOT set up a state of the art 360 seater Linux training centre at Chennai and 25 seater Linux training centre in each and every Collectorate. These training centres were supplied with fully loaded linux notebook computers.

Issues:

1. The school curriculum prescribes proprietary Operating system content and office software content, thus forcing the schools (Government and private) to procure proprietary software at a huge cost. The students are deprived of knowledge on more advanced free and open source software because of this.
2. There is no standard in e-governance software. As a result, the application software developed by one vendor cannot be integrated with a larger system. Thus Government can never be one in such a non standardised environment.
3. India does not have common geographical standard. Each State has its own geographical standard. Within each State, each department adopts its own geographical standard. In such a scenario e-governance is expected to add to the confusion. Accessibility and sharing of data would be major issues.
4. India does not have an IT agency which can provide impartial advice on OS and e-governance software standards.
5. Educationalists are by and large aloof to changes in the technology.
6. Corrupting corporate influence.
7. IAS officers who are expected to lead the nation are themselves aloof to the changes in technology. The IAS Academy (Lal Bahadur Shastri National Academy of Administration) does not offer input on accessible technologies but follows the more expensive and growth prohibitive proprietary technologies.
8. State Government's own Staff training centres have no idea about accessible technologies.

The way to go:

1. The Governments, through policy pronouncement should declare that education department would be free from single software vendor orientation. Without naming the products, lessons should be configured. Example: Operating System, Word processor, Spreadsheet, Presentation software etc.
2. The Governments, through policy pronouncement should make it mandatory that all the IT products should be enabled to function under all popular operating systems.
3. Governments should ban procurement of proprietary IT systems when equivalent open sources systems are available. Adequate justifications should be insisted upon for procuring any closed system.
4. Governments should prescribe common standardised technical standards for e-governance which should be examined by experts and volunteers alike before they actually become a standard.
5. Government should prescribe a common geographical standard if India is to progress in e-governance.
6. Linux should be made mandatory for all IAS and other probationers in Lal Bahadur Shastri Academy of Administration, Mussoorie.
7. All senior IAS / IPS officers should be given 15 day compulsory training in Linux and open office.