

“Sri Lanka geared up to become next BPO hub”

How would you define the meaning of e-Content in your country in terms of its true meaning and practical implication?

Content is understood as being domain specific ICT tools and information made available in digital media and delivered through multiple methods - offline, online and mobile platforms.

Our approach to content has been both tops down, and bottoms up. While we recognize that rural communities have little understanding of the wealth of knowledge and information that can be accessed through appropriate ICT tools, it would not be very productive if we were to take the onus of deciding on the nature of content to be delivered. While there is content that is generally needed across the board, such as content related to school curriculum and national examinations, there is also content that is specifically needed by some communities and not by others. As such our content development projects have been preceded by a needs assessment amongst selected tele-centre communities.

We have also recognized the fact that many communities themselves are a rich source of content. We have, therefore, sought to harness this content through several initiatives, the output of which is being uploaded onto local content management system - www.danuma.lk . This site which is being maintained and developed by the ICTA is today a rich source of information specific to the country.

factfile

Population of the country: 21.1 Million (estimates for 2008)
Total Number of Internet connections: 0.234 mn
Total Number of Telephone lines: 3.4mn
Total number of Mobile connections/users? 11mn
Total number of household having TV/cable TV: 76.3% (2007)
Total Number of PC installations: 47% (2007)
Total number of websites: 6000 (2008) - registered under the .lk domain.
Total numbers of universities: 18
Percentage of literate population: 92.5%

5 pillars

of e-Content development in Austria!

- ↳ Content Creation
- ↳ Content Delivery
- ↳ Content Distribution
- ↳ Content Management
- ↳ Content Updating

Q What is the current status of e-Content in your country - across all industry and aspects?

Level of content development in Sri Lanka is nascent compared to many western countries. There is a significant volume of content available in state organizations and institutes as well as NGOs of which the average citizen is simply unaware. However little or no effort has been extended on creating awareness on the content that is there. Most of these organizations also have no formalized system for updating contents. Moreover, content is not produced with the requirements and capacity of the consumer in mind and as such, it is often not very user friendly.

However the launch of the e-Sri Lanka Initiative in 2004 brought about a significant shift in the mindset on content creation and delivery. The e-Sri Lanka Initiative, being implemented by ICT Agency of Sri Lanka is a development initiative which seeks to leverage on ICT to achieve both social and economic development of the Country. Its approach is holistic and has six key components which integrate with one another to achieve the vision of 'taking the dividends of ICT to every village and every citizen...' The e-Society Programme which is a key component of the e-Sri Lanka Initiative works towards the goal of ensuring that benefits of ICT reach all sections of society especially the disadvantaged. Towards this end, a two pronged grant programme was launched - a relatively small grant of USD5000 was offered directly to the communities themselves to implement projects using ICT which would impact on, or be of relevance to their community. A relatively larger grant of 50,000 USD was on offer to larger organizations - state sector, private sector and NGOs to come up with innovative projects/applications that would impact on rural or disadvantaged communities. The e-Society Programme, from the very onset placed a high degree of importance on content creation and delivery.

This has laid the foundation on which many successful e-Content projects have been launched. It has, without doubt, spurred significant progress in the field of content creation/practices.

The Re-Engineering Government Programme of the ICTA is pursuing major sustainable improvements to efficient, transparency and effectiveness of Government Services. A high level of content aggregation coupled with effective delivery mechanisms is coming into play making Government more accessible to the general public. Already a trilingual service, trilingual knowledge base of 1,600 services available to citizens from 77 key government organizations has been developed capturing all related procedure relevant to each of these services. This knowledge base of government information can be accessed both through a call centre operation as well as through a web based service. Government organizations have been supported and encouraged to develop their websites. The Government Internet Data Center (GIDC) was set up to provide web hosting facilities and currently 66 Government websites are up and running while 20 more are in the pipeline.

An important aspect to content development in Sri Lanka is the need for local language content - especially Sinhala. Sinhala Language is spoken only in Sri Lanka and the onus of developing content in Sinhala falls squarely on us. This is recognized by all content developers and there is a greater focus on this aspect.

There is also a nascent private sector content development industry focused on development of educational content. In Sri Lanka, education is seen by even the poorest of the poor as a basic need and their willingness to pay for this content has created a revenue stream for them. However this cannot be said of the majority of the other sectors where demand is not as high.

Q What area of eContent is best developed in your country? For example, e-health, e-biz, e-culture, e-gov, e-entertainment, e-learning, e-science, or e-inclusion.

Undoubtedly the area where content is best developed in the Country is education. Sri Lankans, across the board, rich or poor, lay a high degree of importance on education. This is reflected in Sri Lanka's literacy rates of almost 91% which is said to be the highest in the region. Parents will sacrifice a fair percentage of their income to ensure that their child gets good education. They see education as a means of giving their children a better life. This being the demand, content developers have fallen in line.

Q Which sector in your country is more aggressive in developing e-Content? Business or private sector; Government or Civil Society?

As at present the major e-Content development which includes ICT based applications are being developed by the Government or through Government led initiatives. Government has taken a lead role in this effort as there is no real commercial value in content development at this stage. Moreover when it comes to e-Government content it is very extensive and is obviously an area that has to be tackled by the Government.

Q How would you describe the gradual progress of development of e-Content in your country in terms of its rise? Any timelines.

Up until the 1990s, content was largely non digital and dissemination took place via print, radio and TV. In the late nineties, several government organizations began producing video films for the benefit of farmers, SMEs, exporters and for promotional purposes. Web content development got going around the mid to late 90s as did CDs with educational content for students, farmers and SMEs.

The gradual progress in content development came with the growing

awareness on ICTs. Today 'Computer Classes' proliferate the country, ICT literacy has grown from - 9.7 % in 2004 to 25% in 2008, more and more households are purchasing computers (10% in 2006/7 as against 3.8% in 2004). Moreover, more and more schools are getting equipped with computer laboratories and multimedia centres making content that can be deployed through these centres a necessity.

The other aspect of relevance to national content development is the growing national tele-centre network. There are currently 600 centres which are being partially supported by the ICTA. Over the next 2 years, we hope to grow this to 1000. Our goal is to have most, if not all, of these centres becoming self sustainable. To do so the centres must offer content and services to the community. Since 2005 or so there have been several other initiatives that have contributed to the growing tele-centre network and the aggregation of content to service these centres.

Mobile phone penetration has increased exponentially. At present it is estimated that while the geographic coverage is about 50-60% the population coverage is over 80%. The number of mobile phone subscribers is 10mn - 50% of the population. Given this scenario mobile telephone operators have also come into the fray - offering downloadable games, news alerts etc. Some operators have moved into more ambitious projects, developing systems for delivery of educational content.

Q Can you list the major initiatives, which influenced and aggravated the development of e-Content in your country?

- >> Establishment of the Council for Information Technology of Sri Lanka (CINTEC) by Act No. 10 of 1984.
- >> Secondary Schools Modernization Project of the Ministry of Education (2000)
- >> Establishment of TradnetSL (1995

-) the e-Commerce arm of the Sri Lanka Export development Board and launch of the first national e-Commerce portal www.srilank-abusiness.com (2003) to promote exports in general, and specifically products of SMEs
- >> Establishment of the Information Communication Agency of Sri Lanka (ICTA) under the Information and Communication Technology Act, No. 27 of 2003
- >> Launch of the e-Sri Lanka Initiative (2004)
- >> Establishment of dedicated Departments for conferring IT Degrees in almost all National Universities
- >> Introduction of IT into the National Schools Curriculum, National Institute of Education
- >> Development of IMM CD-ROMS from the Department of Agriculture Audio Visual Unit (2003)
- >> Intellectual Property Act, No. 36 of 2003
- >> Establishment of Vidatha Centres under the Vidatha Programme of the Ministry of Science and Technology to transfer technology to the rural entrepreneur (2005)
- >> Launch of the SchoolsNet Sri Lanka i(2006)
- >> Establishment of Sri Lanka Computer Emergency Response Team, SLCERT (2006)
- >> National Science Foundation Popularization of Science Programme (2007)
- >> Computer Crimes Act, No. 24 of 2007
- >> Government commitment through establishment of a Cabinet Sub-Committee on Human resource development with priority focus on ICT (2007)
- >> Establishment of a Presidential Task Force on IT and English (2008)
- >> Declaration of the Year of English and ICT (2009)

Q How would you describe the major bottlenecks on the path of e-Content development in your country?

Lack of a standard for local languages was a deterrent for development of local language content that could be widely used. However, this problem is now resolved and both Sinhala and Tamil Language is now available in Unicode format. Most content practitioners are now moving away from proprietary formats and through the Rural Tele-Centre (Nenasala) Network communities are encouraged to switch to Unicode.

Four years ago when the e-Society Programme if the ICTA was launched there was also a general lack of awareness on e-Content creation and its usefulness to society. This too was a bottleneck but has been largely overcome due to some focused awareness activities.

It may also be said that on occasions, there has been some reluctance on the part of content owners, even amongst state organizations to share their content. Content creators had a feeling they were losing 'ownership' or 'identity' of their creation. The contractual measures adopted by ICTA seeks to attract content creators by allowing them to retain ownership rights and also allowing them to release the contents through the 'creative commons license' regime, thus, safeguarding certain residual rights to the creators of the contents.

Q In majority of the countries, e-Content development is significantly dependent on ICT infrastructure and ICT facilities. But, in some countries that are quite developed, ICT has become part of daily life and e-Content development is primarily subjected to the initiatives of an individual/ organization/ government, etc. Whereas, in some countries, especially those, which are developing and under developed, e-Content development is largely dependent on ICT infrastructure. What is the situation in your country?

Our experience has been that for content to have an impact on society and on the daily lives of ordinary people the infrastructure must be in place.

There is no incentive to create content unless it is widely used. Which means, not only must the infrastructure be in place, the citizen should also be computer savvy. As such content development must go hand-in-hand with ICT capacity building and infrastructure development. Sri Lanka has been fortunate in that the e-Sri Lanka Initiative, through its integrated approach, provides for just that - a national e-Literacy drive to develop ICT capacity of the average citizen and an Information Infrastructure Programme to give all citizens affordable access. The e-Society Programme in the meantime has spurred developments in content creation, delivery and innovative ICT applications that impact on disadvantaged communities. The success of the re-Engineering Government Programme which is making Government Services more accessible to the general public would also depend on having the infrastructure in place and on the average citizen being computer savvy.

Q How would you describe the ICT scenario in your country? Please describe in terms of infrastructure, penetration, acceptance and policies.

The ICT scenario in Sri Lanka is clearly led by the e-Sri Lanka Initiative which is a multi-faceted development programme leveraging on ICT. Implementation of the e-Sri Lanka Initiative rests squarely with the ICT Agency of Sri Lanka, the single apex body responsible for ICT policy direction in the country. The ICTA gets its mandate from the Information and Communication Technology Act, No. 27 of 2003. The Agency works under the Office of the His Excellency the President clearly reflecting the importance the Government of Sri Lanka attaches to ICT led development. Moreover, it ensures a wide acceptance of the initiatives of the Agency.

The Policy, Leadership and Institutional development Programme of the ICTA has focused on developing the conducive and necessary environment to achieve the objectives of

'e-Sri Lanka'. Several legal reforms have been brought into create a proactive policy and a regulatory environment that is supportive of ICT reform and ICT-based development. The Agency has also addressed the need for establishing interoperability standards to ensure that a 'single window' is created for citizens to access services provided by the Government. The necessary Technical Architecture, Security and Standards (TASS) across government and all nationwide activities related to ICT is also being implemented.

The Information Infrastructure Programme of the ICTA has focused on establishing a network of 1000 Tele-Centres (Nenasalas) to empower the population through affordable access to ICT. To date, 600 centres have been set up. There are also initiatives of other organizations that have established rural tele-centres - the Vidatha Centres of the Ministry of Science and Technology, Cyber Extension Centres of the Department of Agriculture, entrepreneur driven EasySeva Centres and small cyber-cafes that have sprouted in cities throughout the Country. With the entry of several players into the broadband market, the cost of connectivity has come down significantly. The ICTA, in the meanwhile, is working on installing an information and communication backbone (Rural Telecom Network) to provide competitive and affordable telecommunications services for various users and provide appropriate channels for delivery of e-Citizen services, including e-Government services, e-Commerce and e-Learning.

The highly competitive mobile market in Sri Lanka has been running with a healthy overall annual growth rate of 50-60% for the last few years. Although mobile penetration is about only about 60%, the population coverage is reported to be about 80%. Mobile phone users number 10mn. - 50% of the population. The market has undoubtedly benefited from liberalization and the competition that comes with it.

There has also been a significant development of infrastructure facilities in the national schools with Secondary Schools Modernization Project (SEMP) of the Ministry of Education (MoE) setting up computer learning centres in 1000 schools and multimedia centres in 2300 schools. The MOE together with SEMP has also taken the initiative to establish a wide area network (WAN) connecting most of the senior secondary schools and other related organizations through the SchoolNet.

These measures have brought about significant changes in term of ICT literacy up from 9.7% in 2004 to 25% (2008). With several service providers coming into the fray, the Internet penetration has also expanded significantly. The number of Internet users is estimated to be just under 1 million but would be much higher if the numbers using the islandwide tele-centres are also taken into account.

Sri Lanka however lags behind other countries in the region on Community Radio Broadcasting. This is one area which is yet to be liberalized. Although there are a couple of community radio stations they do not operate autonomously.

Q How do you see the future of e-Content development in your country?

With the heightened awareness in the country on ICTs, I would expect e-Content development to gather further momentum to meet the growing needs of the people.

There is going to be a very significant development of e-Content practices especially in Government Services over the next few years when we expect quite a few of our projects under the "re-Engineering Government Programme" to come to fruition.

The ICTA is together with the industry has geared itself to develop Sri Lanka as BPO hub. The industry which currently nets about

USD250,000 expects to hit USD1mn by 2010/11 and 2mn. by 2015. It aims at being the number one foreign exchange earner for the country in ten years time. To this end several initiatives are underway both to market Sri Lanka as an out sourcing destination as well as to develop supply capacity locally.

The other area in which there will be a significant content development would be in - Education. Most school children supplement the education they get in schools with private tuition classes. There is however a fair segment of our population who don't have access to good teachers or who can't afford private tuition. As such there is a need for self learning educational content which can be deployed throughout the Country - the National Tele- Centre (Nenasala) Network, the SchoolsNet and the

National Library network could all take up the deployment of such content.

Although there are an increasing number of private sector initiatives for developing content which can be deployed through multiple platforms, inclusive of mobile platforms, these have been largely confined to the education sector. For the private sector to direct their expertise to content development in other areas they must see a commercial viability which obviously is not there right now. Although Sri Lankan private sector engages in significant level of 'Corporate Social Responsibility activities', their involvement in this area is minimal. But this could change.

We may also see new development in the mode of content delivery with mobile platform coming into play

given the high degree of mobile phone penetration in the Country. There is likely to be more innovation in this regard due to the highly competitive market.

Q Please explain which medium is the most preferred medium for e-Content development? Print? Or TV? Or Internet/Web? Or Radio? Or Mobile/Wireless? Or a combination of some of these?

Internet/Web would be the most preferred medium in Sri Lanka. As described earlier, infrastructure to facilitate access is being developed throughout the Country. An increasing number of initiatives are using a mobile interface in conjunction with Internet/Web content development given the increasing mobile penetration and usage.

Best Practices

E-LEARNING

e-BIT (<http://www.bit.lk>)
e-BIT, an e-Learning framework, in which online learning content and testing are provided for a degree in Bachelor of Information Technology offered through University of Colombo School of Computing.

Shilpa Sayura (<http://live.shilpasayura.org/>)
A local language digital self learning system designed especially for children in remote rural communities who are disadvantaged by the lack of educational resources and teachers. The system uses an e-Learning solution with interactive content based on the National Curriculum. This product has won international recognition through sever-

al regional and global awards including the Stockholm Global Challenge in 2008.

mLearning
This mLearning system has been developed with features such as Live Lecture and Content Management system with SMS alerts. The 'Live Lecture' feature enables the delivery of lectures online via live video broadcasting based on P2P streaming technology. It provides for real-time video/audio capture and sharing and PowerPoint slide capture and uploading. The 'Content Management' system enables lecturers to upload lecture materials, assignments etc. and students to submit their assignments.

Tre-K (www.edrive.lk/)
Tre-K (Training for e-

Knowledge) was conceptualized and designed to empower rural communities with the necessary English Language and computer skills to be able to harness the wealth of information available online and offline.

IMM (Interactive Multi Media) CD ROMs on Food Crops (http://www.agridept.gov.lk/other_pages.php?heading=IMM%20CD%20ROMs)
A stand alone computer application distributed with CD-ROMs (currently numbering 38), with a range of media elements such as graphics, photos, text, illustrations, animations, sounds and video, presented in a user interface. These IMM CD-ROMs include in local language all the technical information regarding the cultiva-

tion of a wide range of food crops and processing methods.

E-GOVERNANCE

Government Information Center (GIC - 1919) (www.gic.gov.lk)
The Government Information Center (GIC) is a single, electronic, trilingual (Sinhala, Tamil and English) knowledge base of 1,600 services available to citizens from 77 key government organizations. The related procedures that need to be followed to obtain each of these services are also stored in this knowledge base.

Citizens can access all Government related information via this one location - either by calling a dedicated number (1919 from any phone in Sri

Lanka) or by accessing the web portal.

BMD Project (Birth Marriage Death Certificate Issuance Program)

In the past, citizens seeking copies of Birth, Marriage and Death certificates had to contend with numerous difficulties leading to long delays and multiple visits to the offices concerned. The BMD Document Conversion Project has not only turned things around in this regard but is giving the Divisional Secretariats, the organization that dispenses Government services at grassroots, a much needed citizen-centric approach. Following the resounding success of the pilot project implemented in the Colombo District, it is being replicated elsewhere in the Country.

Issue Tracking

The Public Affairs Division of the Presidential Secretariat of Sri Lanka receives 800-1000 requests each day. Most requests come as letters delivered by citizens in person or via post. In order to provide an efficient service to citizens, it is important to be able to track, manage and analyze all requests received, and responded to by the Secretariat. This is a first step in making the Presidential Secretariat more result oriented and citizen centric.

As a result of the 'Issue Tracking' project the Public Affairs division can now track each request it receives from citizens, respond to requests within

a specified period of time, avoid 'losing' requests and in general work more efficiently and effectively.

Government Web Sites

Public sector in Sri Lanka is yet to harness the potential of the Internet in providing information and services. This is primarily attributed to low Internet penetration and lack of in-house know-how on web related issues and financial resources for web development and hosting.

In order to address the above issue, a project was launched by ICTA to increase the government web presence. The project encourages government organizations to disseminate government related information and delivery of services through the Internet by providing financial and technical assistance to construct public websites. The Government Internet Data Center (GIDC) was set up to provide web hosting facilities to all government organizations free of charge. Sixty-six (66) Government websites are now up and running. A further twenty (20) are in the pipeline.

E-BUSINESS

Gemidiriya ITSHED Sri Lanka

A project to empower village communities to form, strengthen and maintain an institutional mechanism oriented to self decision making, planning, resource mobilization, implementation and monitoring and evaluation for community development and liveli-

hood improvement (<http://www.itshed.net/itshed.php>)

Laksala

Laksala is a state owned organization which promotes and markets the produce of local craftsman. It also provides design ideas and supports programmes to develop craftsman skill.

By introducing ICT applications ICTA has re-engineered the operations and processes of Laksala making it far more effective. The services provided through Laksala are now accessible through 600 rural knowledge centres (Nenasalas). Through the Laksala website craftsmen can observe the trends in movement of items supplied by them enabling them to be proactive in catering to the demand with the right quantity and quality and planning their inventories. It is expected that eventually craftsmen will be able to sell their handicrafts online via the Small and Medium Entrepreneurs Portal directly to consumers. (<http://www.laksala.lk>)

Inexpensive FM-enabled LED Screens

By using existing FM broadcasting infrastructure and inexpensive LED display boards radio stations can now send out local language text information encoded into the audible parts of the radio signal. In this manner, information of value to communities such as market prices, weather warnings, and disaster warnings can be sent out. The project is currently running on one

radio station but it is expected to be replicated through others.

Small Biz Lanka

This web portal was developed for the specific purpose of helping SMEs increase their visibility both locally and internationally, with the use of an online catalogue and an e-Commerce platform. The project is being run and managed by a Tele Centre (Nenasala) in the North Central Province of Sri Lanka and has already attracted over 50 rural SMEs. (www.smallbizlanka.com)

Industrial Development Board (IDB)

With the assistance of the ICT, the IDB is developing a wide range of digital content, inclusive of video content, on technical process relevant to micro and small enterprises such as footwear and leather good manufacture, handicraft production, hand-made paper.

E-CULTURE

Paramparika Danuma (Indigenous Knowledge)

www.sri-lanka-alamanac.com documents and archives the grandeur of Sri Lanka's ancient indigenous knowledge. Of special interest is the documenting techniques used in the construction of ancient Dagabas and other ancient structures.

Pansiyapanas Jathakaya Digitized (550 Jathaka Stories)

A popular method of teaching Buddhism relates to the 550 Jathaka stories

or life stories of Lord Buddha.

www.jathakakatha.org is a complete collection of these stories in simplified Sinhala with hand drawn illustrations. An offline CD version is also available.

Sankruthika Kala Nirmana Sansadaya

This project documents the traditional healing techniques (shanthi karma) used in ancient times. The digitized content will shortly be available via a website and CD-ROM.

Rangiri Thakshana Piyasa

Traditional technique of ola leaf writing has been documented and digitized in audio and video format on a CD-ROM. "Veda poth" (writings on ancient healing methods) found in the ancient ola leaf manuscripts have been translated, digitized and uploaded to a local language CMS, (www.danuma.lk/anu)

E-ENTERTAINMENT

Colomba Wate`

Colomba Wate` (Colombo Ride) is the first Sinhala Language mobile game of its kind.

It is freely downloadable onto a java enabled mobile phone from www.games.lk. It incorporates Sinhala audio clips inside the gaming environment to instruct the gamer. It also has an inbuilt model for sustainability through virtual billboards and hoardings placed within the gaming environment.

Ransara Radio

A fully fledged IP radio

channel operating on automated software. This IP Radio

(www.ransara.lk) is managed and operated by a rural tele-centre. Regular broadcasts include news, quizzes, agriculture and health information, PC Doctor, Nenasala (Tele-centre) News. (<http://www.ransara.lk>.)

E-SCIENCE

Mihimadala (The Blue Planet)

This documentary on Nano Technology was designed for the television programme "Mihimadala" (The Blue Planet) series with the intention of keeping the average Sri Lankan abreast of the advances in Science and Technology. The main objective of the project was to familiarize the ordinary person with complex aspects of Science and Technology.

NatureTrek

An e-Learning solution for GCE Advanced Level science subjects - Math, Physics, Chemistry and Biology. Content includes animated lessons with audio and video. Online exams are also available. Project will shortly be available free of charge via the Internet. (www.vidunena.lk)

Water Quality Monitoring Knowledge Base

This live web based knowledge base is for purposes of monitoring water quality in upper catchment areas of the Mahaweli river basin in order to facilitate management of water quality related issues in the Upper

Mahaweli watershed area.

E-HEALTH

Digital Content for Women and Children in Estates

With a view to improving of health of estate women and children, a set of 15 user friendly CDs with flash animations have been produced covering a range of important topics such as importance of vaccination, first aid, home gardening, dangers of an unprotected bottle lamp , waste disposal, nutrition for pregnant women etc.

www.wedananasala.org

This website developed and maintained by the University of Colombo Medical faculty contain static text based health education content in Sinhala and Tamil languages and multimedia based (video streaming) health education content.

Rural e-Health Project

An e-Health programme linking via video-conference two district hospitals to the larger base hospital. An SMS enabled electronic patient management system will also be deployed.

E-INCLUSION

Impaired Aid

Impaired Aid comprises a suite of programs that opens up the world to this marginalized group, giving them a chance to be an equal partner in society. For the visually impaired, it offers a facility which was hitherto not available to them - the facility of

reading a Sinhala Language news paper online. An extension of the same software has enabled email communication between visually impaired and the sighted.

In the case of children with hearing impairments, specially designed teaching material enables teaching of Sinhala Language and basic mathematics.

Documenting Violence Against Women

Documenting incidences of violence against women using specially designed software deployed through hand held PDAs. The Project has been implemented in 5 centres in the Jaffna District. The data is uploaded onto to a web portal <http://www.vaw-jaffna.org>

Digital Talking Books for the Print Disabled

150 local language Digital Talking Books (DTB) and 500 English Language DTBs have been completed under this project and an accessible website launched <http://www.dlf.org.lk/> Given that Braille Books are not widely available these DTBs will serve to meet the needs of the visually handicapped community.

Sign language Software

A portal and CD based learning of Sri Lankan sign language for hearing impaired and their care givers. A video sign dictionary in which each sign is depicted by a video of the lip movement and sign; static images of the

sign and the word in both text and image is also available.
<http://www.lankasign.lk>

LakApps

With a view to removing the language barrier that keep many people from utilizing the full potential of ICT, localized versions of popular open source applications such as web browsers, e-mail clients, web development and e-Learning platforms. Local language user guides/content have been developed to facilitate dissemination among rural communities through grassroots workshops and training programmes.
(www.lakapps.lk)
