

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

KNOWLEDGE VILLAGE



KNOWLEDGE-DISSEMINATING HUB OF THE WORLD

Conceptualized, Designed & Authored By : **V . J REJI VASANTH**

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

Table of Contents

Module 1	Introduction
Module 1.1	INDIA
Module 1.2	Mibiz Knowledge Village
Module 1.3	Mibiz Knowledge Village CEO
Module 2.1	Mibiz Knowledge Village - Satellite based Tele Education (Tele-learning)
Module 2.2	Mibiz Knowledge Village - Satellite based Tele Health & Medicine
Module 2.3	Mibiz Knowledge Village - Satellite based connectivity (e-village)
Module 3.1	EDUSAT
Module 3.2	EDUSAT & Knowledge Village (Tele-learning) (Tele-health medicine) (e-village)
Module 3.3	EDUSAT Architecture
Module 3.4	EDUSAT Tele-Education architecture
Module 4.1	Virtual classroom configuration
Module 4.2	Video-on-demand (Vod) network configuration
Module 4.3	Data/library access network configuration
Module 4.4	Radio networking configuration
Module 5.1	EDUSAT Effective Interactive Multimedia delivery
Module 5.2	Television Broadcast
Module 5.3	Night time Loading at receiving end
Module 5.4	Online Education through Internet
Module 5.5	Telephone as Return Link
Module 5.6	Internet as Return Link
Module 5.7	Talkback Channel as Return Link
Module 5.8	Webcam as Return Link
Module 5.9	Voice Chat as Internet
Module 5.10	Asymmetric Internet through TVRO
Module 5.11	Videoconferencing
Module 5.12	Radio Broadcast
Module 6.1	Knowledge Village- Interactive e-learning Solutions
Module 6.2	EDUSAT e-learning architecture
Module 6.3	Virtual University
Module 6.4	Brain Theory
Module 6.5	Mission CD/DVD Authoring India-2003
Module 7.1	Research: Information Technology (IT) & Information Technology Enabled Services (ITES)
Module 7.2	Research: Biotechnology (BT)
Module 7.3	Research: Nanotechnology (NT)

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

Mibiz Knowledge Village is powered by innovations. Efficient utilization of the existing knowledge can create comprehensive wealth and also improve the quality of our society i.e. life - in the form of better health, education, infrastructure and other social indicators.

Mibiz Knowledge Village offers a huge opportunity to collaborate with the Scientists, Academic Research scholars, Universities & Organizations, to create a modern, vibrant Knowledge disseminating hub of the World.

Mibiz Knowledge Village brings about a fusion of Knowledge with IT, ITES, & Space Missions Services for disseminating knowledge to people in all walks of life through Satellites & Virtual Classrooms.

Mibiz Knowledge Village benefits:

Knowledge-disseminating hub of the World.

IT, ITES, & Space Missions Services destination!

Research – IT, ITES, Biotechnology, Nanotechnology

International University.

Knowledge Broadcasting Corporation (KBC)

Interactivity & Content Management Research

Access to all citizens- Tele/e-learning, Tele/e-health & medicine, e-village

To create, share, access and protect knowledge

To create Knowledge economies.

High performing and adaptable technology infrastructure.

Knowledge Trading- Business & education.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT

Satellite based Education & Research Network

- EDUSAT Architecture
- EDUSAT Effective Interactive Multimedia delivery
- EDUSAT Tele-Education architecture
- EDUSAT elearning architecture
- Virtual classroom configuration
- Video-on-demand (Vod) network configuration
- Data/library access network configuration
- Radio networking configuration
- EDUSAT & Knowledge Village (Tele-learning) (Tele-health & medicine) (e-village)



Mibiz The Knowledge Village e-learning Methodology

e-learning Solutions & Research Network

- Virtual University
- Brain Theory
- Content Management
- Interactive Portal
- Interactive Applications
- Interactive Content Based Database (CD/DVD/WEB/KIOSK)
- Online digital Library (e-books)
- Chat
- Audio / Visual Online Theatre (Video on Demand)
- Tele-Conferencing
- Remote Access Learning
- m-learning

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

INDIA

India has long been the pre-eminent knowledge-disseminating hub of the World. The Indus Valley civilization, one of the oldest in the world, dates back at least 5,000 years. From the Vedic age downwards the central conception of education of the Indians has been that it is a source of illumination giving us a correct lead in the various spheres of life. 'Knowledge according to some thinker, is the third eye of man, which gives him insight into all affairs and teaches him how to act.

Takshasila/Taxila was the most famous seat of learning of ancient India. As a center for learning the fame of the city was unrivalled in the 6th century B.C. The references tell us of how teachers and students lived in the university.

It attracted scholars from different and distant parts of India. Numerous references show how thither-flocked students from far off regions. The fame of Takshasila as a seat of learning was of course due to that of its teachers. They are always spoken of as being "world renowned" being "authorities", specialists, and experts in the subject they professed.

The students are always spoken of as going to Takshasila to "complete their education and not to begin it." They are invariably sent at the age of sixteen or when they "come of age".

Mithila, as a seat of learning flourished remarkably in ancient India. The erudite and versatile scholars, who wrote commentaries on a variety of texts, made the period famous in the literary world, Mithila made conspicuous contributions in the realm of severe and scientific subjects. By its scholastic activities Mithila in those days, like Nalanda, used to draw students from different parts of India for advanced and specialized studies in Nyaya or Logic, of which it was then the chief center.

Nalanda, the most renowned university in ancient India. It derived its name from Na-alam-da, meaning Insatiable in Giving, established in the 5th century B.C. It remained a live center of learning till the 12th century A.D.

Hsuan Tsang, the Chinese traveler studied here in the 7th century A.D. He was one amongst many of those from East and Southeast Asia who came here to study logic, meta-physics, medicine, prose composition and rhetoric.

The university of Nalanda offered free educational and residential facilities to as many as 10,000 students and 2000 teachers, for it was supported by a number of villages. Its library, Ratna Sagar, is believed to have contained nine million volumes.

The ideal of education has been very grand, noble and high in ancient India. Indian mathematicians introduced the zero, the decimal system and the method of multiplication. Indian astronomers were tracking the heavens as far back as 3,100 B.C. and much more to be listed from all sectors of learning. The percentage of literary people in India was more than that at present. At least up to the 7th century A.D. this system worked most satisfactorily. People showed brilliancy in all departments. e.g. Mathematics, Astronomy, Medicine, Chemistry, Poetry, Drama, Grammar and Philosophy. No nation could excel these people at that time. From the 4th century B.C. to the 11th century A.D. all foreigners who came in contact with India and studied her civilization critically were very much impressed by it. They spoke highly of Indian character specially their truthfulness, honesty, and sense of justice. The influence of the system of education was very great among the people in general.

Education is still highly regarded in India.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

Mibiz Knowledge Village

Mibiz Knowledge Village is powered by innovations. Efficient utilization of the existing knowledge can create comprehensive wealth and also improve the quality of our society i.e. life - in the form of better health, education, infrastructure and other social indicators. Ability to create and maintain the knowledge infrastructure, develop knowledge workers and enhance their productivity through creation, growth and exploitation of new knowledge. These elements were the reason for the development of Knowledge Village.

Mibiz Knowledge Village offers a huge opportunity to collaborate with the Scientists, Academic Research scholars, Universities & Organizations, to create a modern, vibrant Knowledge disseminating hub of the World. The e-learning community will develop the region's talent circle and accelerate its move to the knowledge economy.

We bring about a fusion of Knowledge with IT, ITES, & Space Missions Services for disseminating knowledge to people in all walks of life through Satellites & Virtual Classrooms.

Mibiz Knowledge Village benefits:

Knowledge-disseminating hub of the World.

IT, ITES, & Space Missions Services destination!

Research – IT, ITES, Biotechnology, Nanotechnology

International University.

Knowledge Broadcasting Corporation (KBC)

Interactivity & Content Management Research

Access to all citizens- Tele/e-learning, Tele/e-health & medicine, e-village

To create, share, access and protect knowledge

To create Knowledge economies.

High performing and adaptable technology infrastructure.

Knowledge Trading- Business & education.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

Mibiz Knowledge Village CEO



Mr. V. J Reji Vasanth,
Chief Executive Officer
Mibiz Knowledge Village.

Born in Kerala, India, gained BA Hon's in English Literature, (Kerala University), later undergone MA Hon's in English Literature, (Kerala University), and Bachelor of Technology (Computing) from the Open University British Columbia, Vancouver, Canada.

Devoted, in Research, teaching and taking seminars. Started his career in the field of Programming, & Multimedia Solutions. & engaged in the development of several Project Reports [IT, Mgmt, & HR].

The Technology Information, Forecasting and Assessment Council (TIFAC), an autonomous organization under the aegis of the Department of Science & Technology (Govt. of India) plays a vital role in technology development and promotion in India through its various programs.

The TIFAC Report states "CD-ROMs with storage capacity of 1.6 GB of data have been instrumental in fast information retrieval and access. Use of multimedia for storage of text, graphics, video, sound etc. has immensely benefited the information storage system"
<http://www.tifac.org.in/>

By 2003, Mr. Reji Vasanth, integrating the Content Management, Programming and Multimedia skills together to an Industry that is Interactive elearning Authoring - CD, DVD, Web, Kiosk. A Project Report titled 'Mission CD/DVD Authoring India 2003,' a total solution for Interactive e-learning solution. The Report discusses e-learning implementation (2003-2010) in India.

Since then Mr. Reji Vasanth, is on the move of implementing a Knowledge Village - bring about a fusion of Knowledge with IT, ITES, & Space Missions and looks forward to developing the Knowledge Village to a Knowledge-disseminating hub of the World, providing services for disseminating knowledge to people in all walks of life through Satellites & Virtual Classrooms.

Tel: + 91 0 9387822966
E-mail :reji@missionindia.biz
Chat:(Yahoo/Hotmail/Skype) mibizreji

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

Mibiz Knowledge Village - Satellite based Tele Education (Tele-learning)

“Education to Wisdom,”

Mahatma Gandhi's values and his vision of what constituted a truly civilized and free India, it was not surprising that he developed firm views on education. Education not only moulds the new generation, but also reflects a society's fundamental assumptions about itself and the individuals, which compose it. The real difficulty is that people have no idea of what education truly is.

The requirement of transforming a nation, into a knowledge vibrant e-learning environment is vital. A fusion of Knowledge with IT, ITES, & Space Missions Services through Satellites & Virtual Classrooms makes this mission a 'value-added education system'. The mission of taking space technology and knowledge products from the University directly for communities at the grass root level adds the glory of Mibiz Knowledge Village Tele Education.

The emphasis on Research & Development in the Knowledge Villages Universities, Knowledge Broadcasting Corporation (KBC), instead of simply memorizing all the knowledge that has been accumulated in a particular field should be the windows of the new horizon.

The whole purpose of education in a nation is to develop and enhance the potential of our HR and progressively transform it into a knowledge village, the true need for knowledge is to explore, or to discover the key idea “who am I” & “what is my goal.”

The Gandhian School of Educational Thought that has not received adequate attention in policy formulations during last five decades. Has a dominant role to play in the Knowledge Village, which will be a new leap 'Educational Renaissance in every Nation,' The real capital of this knowledge Village will be the people engaged in the development of a vibrant generation.

Education simply means knowledge of letters. It is merely an instrument, and an instrument may be well used or abused. The same instrument that may be used to cure a patient may be used to take his life, and so may knowledge of letters. We daily observe that many men abuse it and very few make good use of it; and if this is a correct statement, we have proved that more harm has been done by it than good.

This Research society will be highly accomplished to create a knowledge intensive environment along with an enabling process to efficiently create, share, use and protect knowledge for the future.

Tele Education (Tele-learning)

There are several tiers in Tele-education; Videoconferencing is now used in a wide variety of settings and is sometimes referred as Tele-education. It has many advantages over traditional teaching methods and is increasingly becoming a preferred medium for teaching larger groups of students. The Tele learning model to reach students in remote areas and help overcome the shortage of teachers. A single lecturer can not only teach students in the far corners of the nation but also support good teachers in remote areas to learn about new concepts and, in turn, share it with their disciples. Through Tele-education, a university could host virtual classrooms in multimedia environment for students in remote corners of the country. The future students can also record the procedure for use as (e-book).

Knowledge Villages 'Brain Theory' lays the foundation of disseminating digital knowledge in the apt methodology. Knowledge Villages standardized Content Management with supportive graphical animations (2D, 3D). The graphics brings out a fusion with Medical Science & Information Technology with the aid of Multimedia Solutions to solve the riddle of the mystery of the evolution of the Nervous System with Computer Generated Graphics.

“Education is undoubtedly the most vital investment that people can make in their future.”

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

Mibiz Knowledge Village - Satellite based Tele-Health & Medicine

“Health is Wealth,”

Healthy Vibrant society is a nations pride. As the real capital of this Knowledge Village will be the people engaged in the development of a vibrant generation. A fusion of Knowledge with IT, ITES, & Space Missions Services through Satellites & Virtual Classrooms makes this mission a ‘value-added information system’. The mission of taking space technology and knowledge products from the University directly for communities at the grass root level adds the glory of Mibiz Knowledge Village **Tele-Health & Medicine**

Providing healthcare services via telemedicine offers many advantages. It can make specialty care more accessible to underserved rural and urban populations. Telemedicine one transfers the expertise, not the patient. *Tele is a Greek ‘telly’ word meaning “distance “and ‘Mederi’ is a Latin word meaning, “to heal”*. Tele-medicine has been defined as the use of telecommunications to provide medical information and services. Hence Telemedicine enables people in one geographical area to access of a trained medical practitioner in another geographical location.

Tele-medicine is a method by which specialist doctors can examine, investigate, monitor and treat patients in remote areas through satellite video conferencing. Hospitals of the future will drain patients from all over the world without geographical limitations. High quality medical services can be brought to the patient, rather than transporting the patient. The Image acquisition, image storage, image display and processing, and image transfer represent the basis of telemedicine. Tele-medicine is becoming an integral part of health care services in several nations. i.e. Tele-medicine is used to transmit patients' medical images, records, and output from medical devices and live two-way audio and video. With the help of these, specialist doctors can advise, online, the doctors or paramedics at the patient's end on medical care, or even guide the doctor during a surgery.

Clinical teaching traditionally equates 'high quality' with low student faculty ratios. The Virtual presence ‘Virtual Professors’ of the specialist is acknowledged; a patient can access resources in a tertiary referral centre without the constraints of distance. Tele-medicine allows patients to stay at home ensuring much needed family support.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

Online Digital Library for Medical Files

Extremely high standards of clinical care and teaching expertise supported by advanced laboratories and separate teaching groups scattered in buildings across the large university campus also made it impractical to show an interesting or unusual clinical case to all students simultaneously. In addition, a lack of permanent video recordings from operations deprived students of the chance to revise using materials at a later date or catch up on content they had missed.

Linking the university's College of Medicine & Health Sciences with the hospital allows the Knowledge Village to offer high-quality instruction to large groups of medical students without crowding operating theatres. As well as being able to converse with the surgeon via a live audio & video link during operations, students can review past operations (e-book). To provide more flexible, student centered training the Virtual University has a significant leap in videoconferencing-based telemedicine, & Virtual Digital Libraries

Medical / Health e-learning for people in all walks of life

The Diagnostics Centre should offer all its patients a safe, easy and convenient way to book examinations, search for information and retrieve medical files from an online digital archive.

Tele-consultations to the remote corners of a nation, to educate the doctors in these remote primary centers with the latest advancement in the field of medicine through such mediums as international seminars, workshops, teaching programmes, and to strengthen the skills and confidence of the doctors at the remote primary centres and build a better relationship with their patients.

The Knowledge Village should provide adequate data regarding the diseases, and keep an update of the epidemics affected to the society. Proper Research should be carried out in its perspective and it should be presented through Research papers, Knowledge Broadcasting Corporation (KBC), Interactive CD/DVD/WEB/KIOSK Authoring, The Data should be a standardized enabling Multilingual Content Management format with supportive graphical animations (2D, 3D).

“Prevention is better than cure.”

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

Mibiz Knowledge Village - Satellite based connectivity (e-village)

Mibiz Knowledge Village connectivity (e-village) aims co-operation with the challenge of new century and expand the use of new technology to mass level. To use and expand the computer technology in the grass root level. to gain, practice and further develop their Information Technology (IT) skills, learn about things of local interest and get together to swap ideas, thoughts and suggestions!

Providing services that promote and support farmers, educators, researchers, planners, designers, journalist, social worker and entrepreneurs for improving their access to the national and global information. The ability to choose the right idea and option can change the world around us in our own way.

The Knowledge Village centers should be information disseminating centers i.e.; keeping data on agriculture, fisheries, livestock, health, education, environment etc into a village database, and it should be of easy access to people.

Information Technology (IT) is the road, which must be brought to the doorsteps of the poor. The poor should be given the opportunity to muster the skill to use this technology to their advantage. We must design the Information Technology in such a way that a totally unprepared poor person can immediately get the hang of it without feeling threatened.

Information regarding the government, the private sector, education, health, environment and the important daily issues must be available to all the people. The ability to choose the right idea and option can change the world around us in our own way.

The Knowledge Village connectivity through tele-communication with satellite, high bandwidth fiber optic cables, wireless reaching the rural areas from cities and through Internet kiosks enables the urban facilities of all nations. The Knowledge connectivity (e-village) provides education, skills training for farmers, artisans and craftsmen and entrepreneurship programmes.

A proper network linked to the Regions Headquarters through the Broadband fibre and wireless connectivities makes the people of the remote areas of the nation to have a vision of the nation, and of the vital presence of their contribution of the nations welfare. Broadcasting facilities through Satellite radios Knowledge Broadcasting Corporation (KBC) should provide adequate updates of men and materials of the nation.

Mobile Learning & Connectivity enhances the alert information during disasters. A proper disaster Management System including Scholars, Scientists, and Technicians body should be created for handling disaster situations of the future. The Disaster Managements task is to track the disasters, predict the calamities, handle the disasters with adequate technologies and enable a reliable security for the citizens of the nation. Disaster zones should be located and a team should be implanted for proper study.

The Remote areas of a nation should be networked to Knowledge Village through the Broadband fibre and wireless connectivities. Mobile cell phone with Global Positioning Systems (GPS) facility may be provided for emergency communication. This will also provide the population data, local meteorological and local sea state data through SMS from the Village knowledge Centres obtained from near by the Meteorological station, Disaster Management stations, Knowledge Village (e-village) and the other service providers.

The Knowledge Village should support with cost effective safe techniques, Training, Application of Technology, Improving the Productivity, Cost effective Marketing Strategies, Product Branding, Marketing for realizing the value added price, Application of technology for improving the productivity, Storage and preservation systems.

The Knowledge Village should create an e-village forum. The purpose of the forums is to provide the citizens of the nation with a public discussion arena. If they want to raise an issue or concern they have the right to represent it for the well being of the nation irrespective of caste or creed.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT



The 1950 kg 'EDUSAT', India's exclusive satellite for educational services, was successfully placed in the 36,000 km high Geostationary Orbit on 21.09.2004. EDUSAT is designed to provide service for seven years. The successful launch of India's first educational communication satellite "EDUSAT" by GSLV-F01 heralds the operational reliability of the heavy lifter to geostationary orbits. EDUSAT is the first Indian satellite built exclusively for serving educational needs. It is mainly intended to meet the demand for an interactive satellite based education system for the nation.

EDUSAT is the first exclusive satellite specially configured to meet the growing demand for an interactive satellite based distance education system for the country through audio-visual medium, employing Direct To Home (DTH) quality broadcast. It has become the first country in South Asia to have an exclusive educational satellite.

EDUSAT is the first exclusive satellite for serving the educational sector. The Indian Space Research Organization (ISRO) took nearly three years to build the \$17m satellite. "It will be another leap forward of the Research Organization in the sky spreading education. The universities in Indian states would be linked through the satellite. It is specially configured for Knowledge disseminating through audio-visual medium, employing digital interactive classroom and multimedia multicentric system.

The satellite has multiple regional beams covering different parts of the nation — five Ku-band transponders with spot beams covering northern, north-eastern, eastern, southern and western regions of the country, a Ku-band transponder with its footprint covering the Indian mainland region and six C-band transponders with their footprints covering the entire nation.

The concept of beaming educational programmes through satellites was effectively demonstrated for the first time in our Nation was in (1975-76) through *Satellite Instructional Television Experiment (SITE)*, conducted using *the American Application Technology Satellite*. The satellite will connect schools in remote parts of the country using the idea of a virtual classroom, and will also provide literacy lessons for adults and training programmes for teachers.

The pivotal role of 'Knowledge dissemination through proper education with the fusion of IT, ITES, & Space Missions Services' has become the catalyst of the new World, and it acts as an instrument of social, economical change by altering the human perspective, and transforming the traditional mindset of society is well recognized.

The Indian Space Research Organization (ISRO) Research has provided the space segment for EDUSAT System and demonstrate the effectiveness of the satellite system for interactive education.

The future of EDUSAT depends on creating a proper Literary Circle, i.e. specialists selected from each and every subject who can support with quantity and quality Content Management System with Interactive Graphical Animations & Virtual Walkthroughs.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT & Knowledge Village (Tele-learning) (Tele-health & medicine) (e-village)



The society powered by Knowledge innovations; efficient utilization of the knowledge, by performing Research & development for updating the resources of history, existing knowledge & the vision of future can accumulate comprehensive database, and also improve the quality of society through health (Tele-health & medicine) education (Tele-learning) infrastructure, services & awareness for remote villages (e-village). The ability to create and maintain the knowledge Village to develop knowledge work force and enhance their productivity through creation, growth and exploitation of knowledge.

The satellite sends the signals back that can be received by the reception terminals at the learning ends where the dish antennas with associated equipments have been installed and are oriented towards the Satellite transponders. The teaching in the studio can now be seen and heard in the classrooms where these are equipped with a large screen or projection inch television with a camera and audio-equipment, or a computer with LCD projector and audio equipment. When a learner asks questions the audio and visual signals gets now beamed to the satellite, which can now be received at the teaching end. By using the facilities on the console, the teacher can now see and hear the student. Also, student will now be visible to all the other learners in various others learning ends creating a Virtual classroom.

EDUSAT Satellite system can facilitate the dissemination of knowledge to the rural and remote population about important aspects like health, hygiene their social outlook and allow professionals to update their knowledge platform as well. Thus, in spite of limited trained and skilled professionals, the aspirations of the growing youth population at all levels can be met through the concept of tele-education.

The satellite will revolutionize learning in nations by taking education, information, Village connectivity to remote classrooms, With multi-lingual and multi-cultural race the nation separated by vast geographical distances, and, in many instances, inaccessible terrain. Satellite would help Research scholars to classrooms across the country to bring people under the satellite system and can facilitate the dissemination of knowledge to the rural and remote population about important aspects like health, hygiene and personality development and allow professionals to update their knowledge base as well." And it will bring people in all walks of life in one terrain.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT Architecture

EDUSAT is a technology network comprising
Uplink stations in selected national and state locations (to act as teaching ends),
Downlink stations or facilities in various educational institutions (as learning ends), and
The satellite

EDUSAT services for education and knowledge empowerment is specially configured to meet the growing demand for an interactive satellite based distance education system for the country through audio-visual medium, employing Direct to Home (DTH) quality broadcast.

Two types of receive terminals can be used to receive the EDUSAT programmes.

1. Receive only Terminal (ROT): It is 1-way video/1-way audio, no interactivity. Any signal originated from the main hub can be received on the ROT.

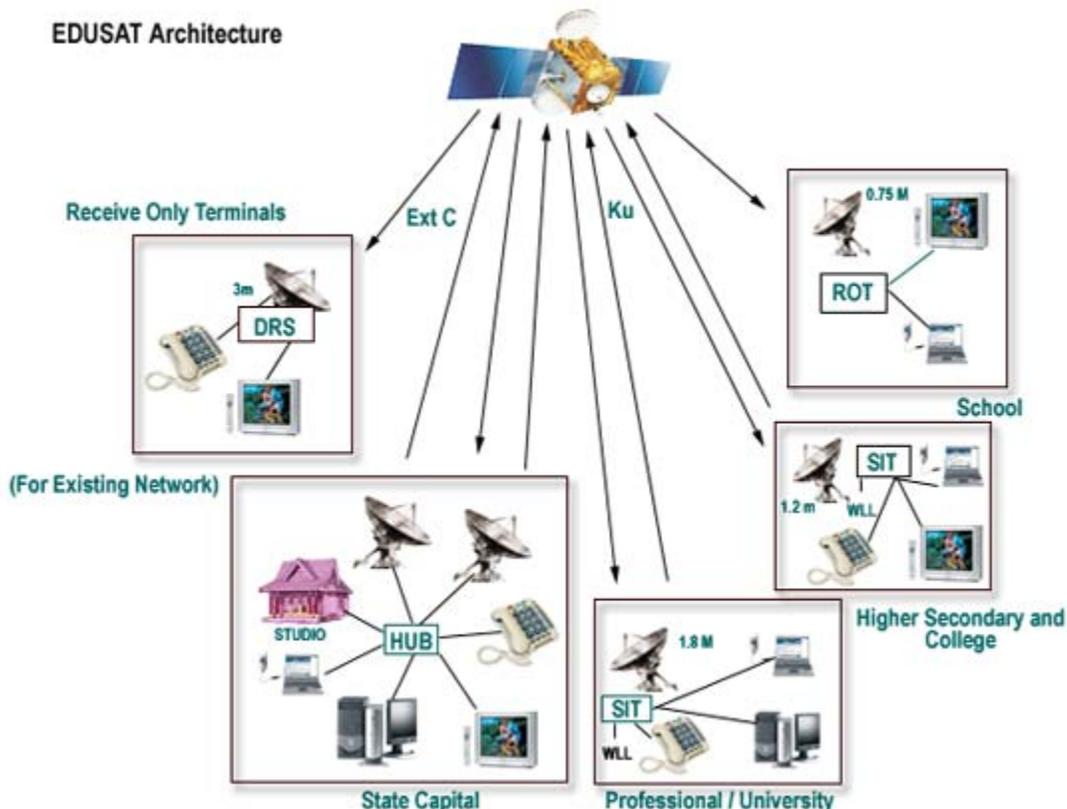
2. Satellite Interactive Terminal (SIT): It is 1-way video/2-way audio.

This terminal can receive the broadcast signal transmitted from the main hub and can interact with any other similar SITs configured under main network. It can also receive signal transmitted from the sub-hub.

EDUSAT carries five Ku-band transponders providing spot beams, one Ku-band transponder providing a national beam and six Extended C-band transponders with national coverage beam. It will join the INSAT system that already has more than 130 transponders in C-band, Extended C-band and Ku-band providing a variety of telecommunication and television services.

Direct Reception System (DRS) Network is being used for Training / Conferencing
Wireless Local Loop (WLL)

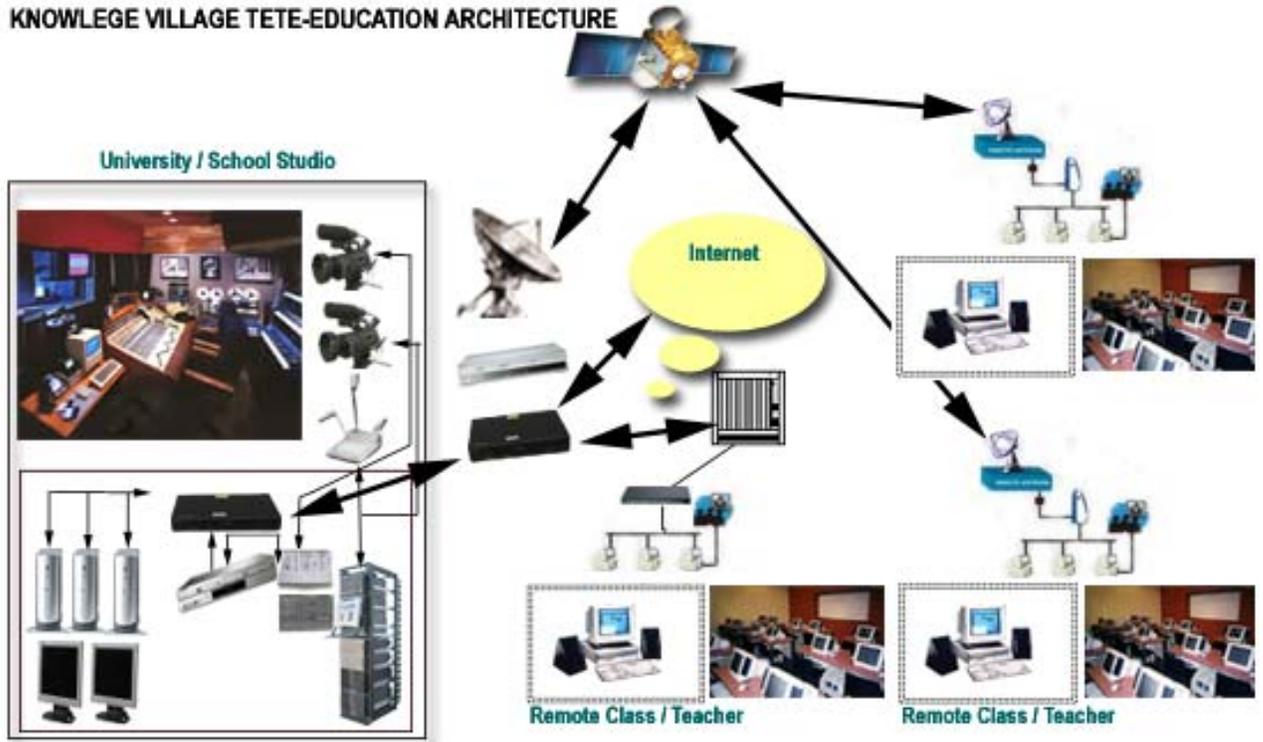
The receive only terminal (ROT) will have 0.75 meter antenna and can be used for TV and data reception. Also, satellite interactive terminal (SIT) with 1.2 m antenna for low data rates can have a computer and TV set for interaction. Connectivity can be further extended to nearby areas using Wireless Local Loop (WLL).



IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

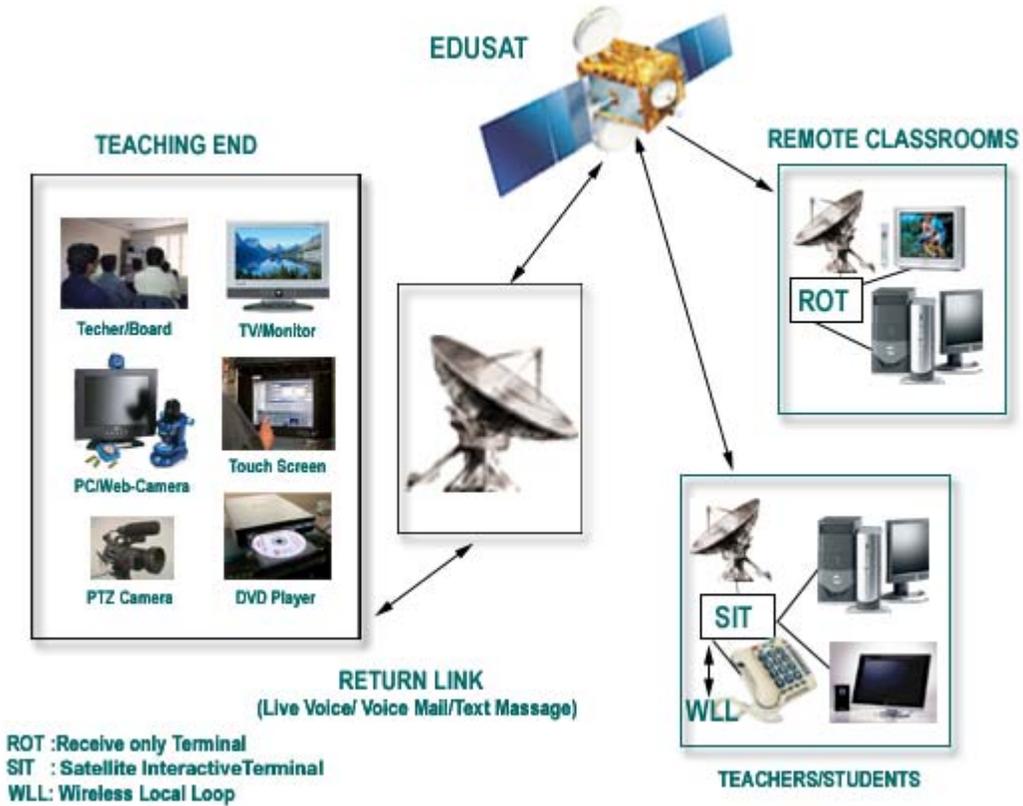
KNOWLEGE VILLAGE TETE-EDUCATION ARCHITECTURE



IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

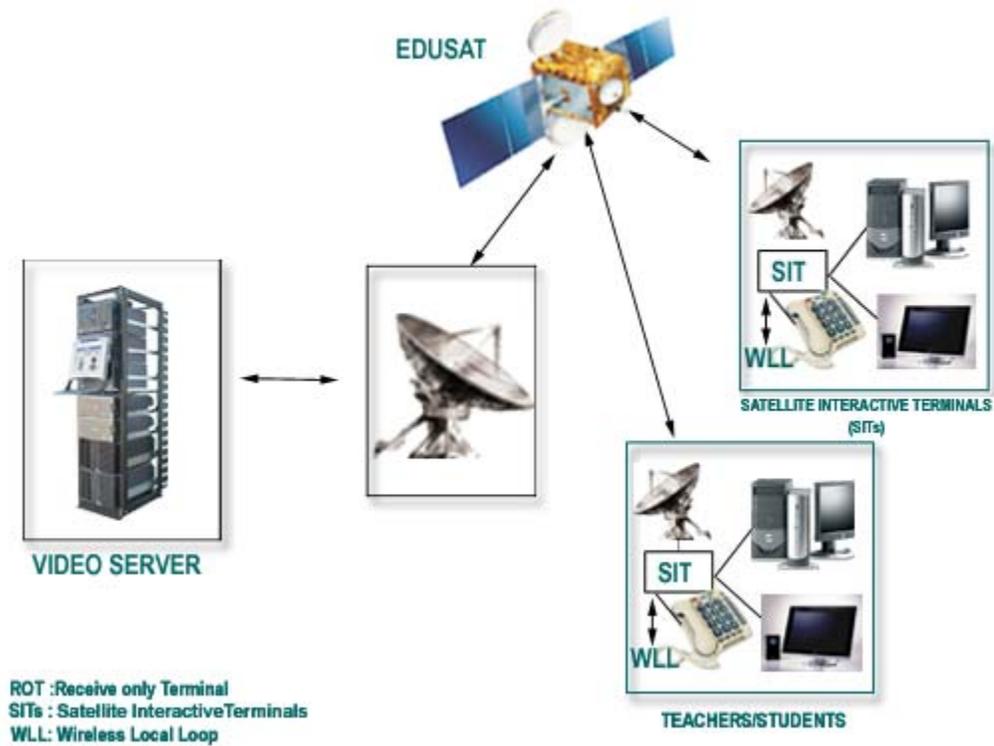
KNOWLEGE VILLAGE VIRTUAL CLASSROOM ARCHITECTURE:



IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

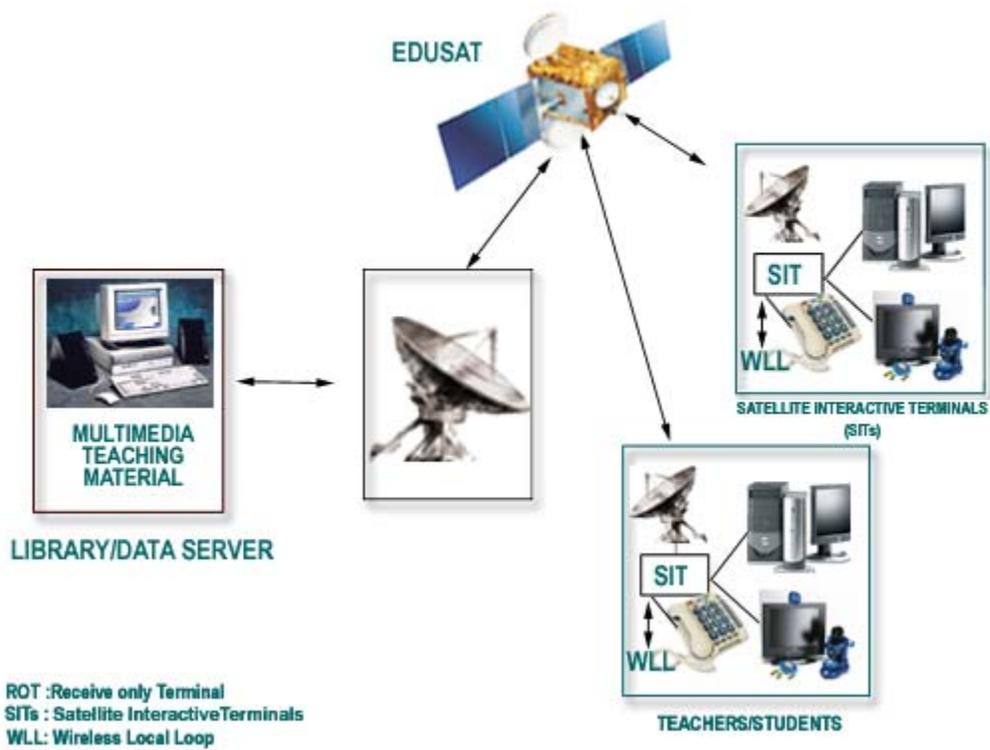
KNOWLEGE VILLAGE VIDEO-ON-DEMAND (VOD) NETWORK CONFIGURATION:



IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

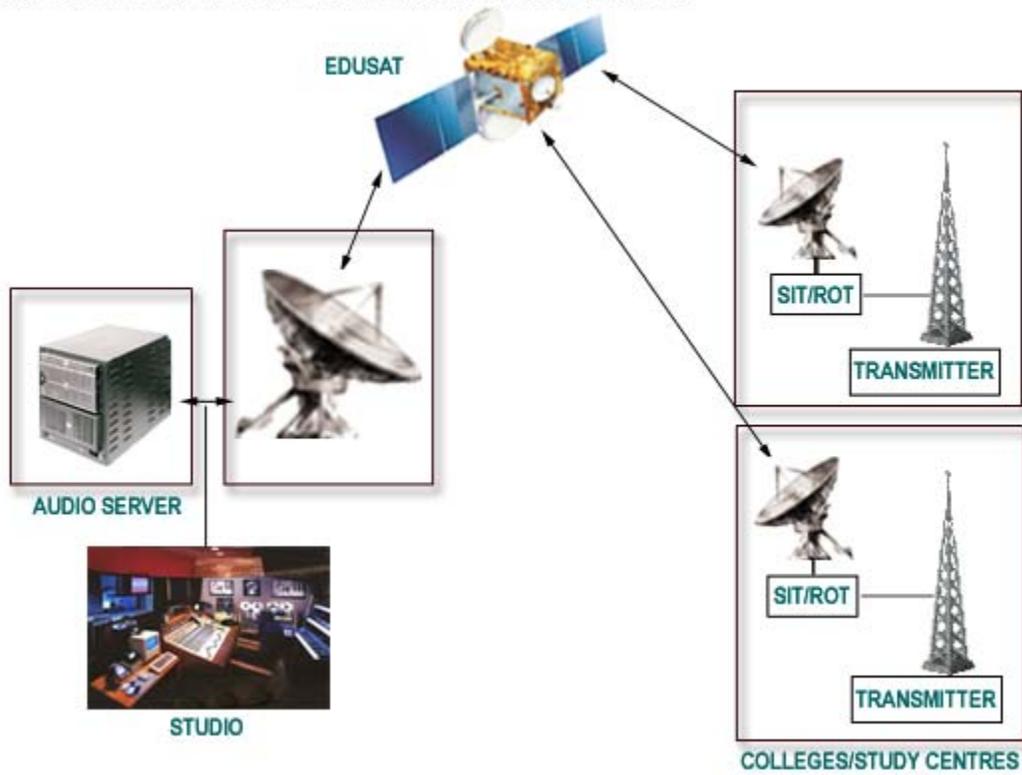
KNOWLEGE VILLAGE DATA/LIBRARY ACCESS NETWORK CONFIGURATION:



IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

KNOWLEGE VILLAGE RADIO NETWORKING CONFIGURATION:



IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT Effective Interactive Multimedia Delivery:



Technological Possibilities of EDUSAT

Effective Technological delivery:

1. Television Broadcast
2. Night time Loading at Receiving end
3. Online Education through Internet
4. Telephone as Return Link
5. Internet as Return Link
6. Talkback Channel as Return Link
7. Webcam as Return Link
8. Voice Chat as Internet
9. Asymmetric Internet through TVRO
10. Video Conferencing
11. Radio Broadcast

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT Effective Interactive Multimedia delivery

Television Broadcast



Satellite television is delivered by way of orbiting communications satellites located 37,000 km (22,300 miles) above the earth's equator.

Satellite television, like other communications relayed by satellite, starts with a transmitting antenna located at an uplink facility. Uplink satellite dishes are directed toward the satellite that their signals will be transmitted to, and are very large, as much as 9 to 12 meters (30 to 40 feet) in diameter. The increased diameter results in more accurate positioning and improved signal reception at the satellite. The signal is transmitted to devices located on-board the satellite called transponders, which retransmit the satellite signal back towards the Earth at a different frequency.

The satellite signal, quite weak after travelling a great distance is collected by a parabolic receiving dish, which reflects the weak signal to the dish's focal point and is received, down-converted to a lower frequency band and amplified by a device called a

Low-noise block converter (LNB). Direct broadcast satellite dishes use an LNBF, which integrates the feedhorn with the LNB.

A new form of satellite antenna, which does not use a directed parabolic dish and can be used on a mobile platform such as a vehicle, was recently announced

There are two primary types of satellite television distribution: direct broadcast satellite (DBS) and television receive-only (TVRO).

The extended C-band and Ku-band providing a variety of telecommunication and television broadcasting service. EDUSAT will cater to Direct-To-Home television broadcast services

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT Effective Interactive Multimedia delivery

Night time Loading at receiving end



EDUSAT services for education and knowledge empowerment is specially configured to meet the growing demand for an interactive satellite based distance education system for the country through audio-visual medium, employing Direct to Home (DTH) quality broadcast.

As It was aimed at providing effective teacher training, supplementing the curriculum-based teaching, greater community participation, access to quality resource persons and taking education to all parts of the country.

The centralized data bank which could be accessed through the satellite -when configured with technological combinations - could be used for video conferencing, voice chat as internet, radio and TV broadcast, night time loading at receiving end, online education through internet, telephone and internet as return link,

The basic focus would be on training of teachers and upgrading the skills of the teachers in the primary and secondary schools. But he said the success of the Edusat depended on the coordination and interest at the receiver level.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT Effective Interactive Multimedia delivery

Online Education through Internet



Education has as one of its fundamental goals the imparting of culture from generation to generation

The Internet and the World-Wide Web (www) have revolutionized education, but it is sometimes a challenge to untangle the large amount of information on the Web, to aid teachers and students.

Online education is transforming knowledge-delivery processes and 'virtual education'. e-learning has brought about profound changes the world over in the way people think, learn and train, allowing them to do it anywhere, any time. Through the web a user can access content from any point, off or in campus, through a computer and connectivity. Web is being used for delivering more extensive content on a particular course.

EDUSAT professes teacher-based virtual classrooms. In the virtual classroom mode, teacher will require 'teacher support material' like charts, models, PowerPoint presentations, OHP slides, computer animation, graphics, flash, video clippings, etc. and not necessarily conventional '20 minute video'. Such teacher support materials have to be prepared after content analysis of each topic to be taught through virtual classroom mode

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT Effective Interactive Multimedia delivery

Telephone as Return Link



We can download programmes directly in our computers, arrange on-line education with the Internet, create audio interactivity using telephone as the return link, delivery of video lessons etc. All this will be arranged using the studio of each State with an uplink hub. The studio will have an uplink facility to the satellite.

We may not concern ourselves with what is going to happen at the studio, which will be located in each state. Programmes will be generated and beamed in local languages. This scenario is as real as the claim that now everybody can be potentially connected with the cell-phone technology! We have to prepare ourselves for taking advantage of the EDUSAT for teaching-learning.

The centralized data bank which could be accessed through the satellite -when configured with technological combinations - could be used for video conferencing, voice chat as internet, radio and TV broadcast, night time loading at receiving end, online education through internet, telephone and internet as return link

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT Effective Interactive Multimedia delivery

Internet as Return Link



It is mainly intended to meet the demand for an interactive satellite based distance education system for the country. It strongly reflects India's commitment to use space technology for national development, especially for the development of the population in remote and rural locations.

The centralized data bank which could be accessed through the satellite -when configured with technological combinations - could be used for video conferencing, voice chat as internet, radio and TV broadcast, night time loading at receiving end, online education through internet, telephone and internet as return link

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT Effective Interactive Multimedia delivery

Talkback Channel as Return Link



Education has as one of its fundamental goals the imparting of culture from generation to generation.

The centralized data bank which could be accessed through the satellite -when configured with technological combinations - could be used for video conferencing, voice chat as internet, radio and TV broadcast, night time loading at receiving end, online education through internet, telephone and internet as return link

This network of talkback and receive terminals are being utilized to conduct training programmes for the field staff and for communicating specific development oriented messages to the audiences at the receive terminals. The Talkback Channel acts as a Return Link.

A 1.8-meter antenna, a satellite interactive terminal of 2 Mbps, a computer, a web cam, a TV and a telephone. This configuration can be used for two-way audio and two-way video facility over satellite channel for data and TV broadcast reception, video-conferencing and online education. Connectivity could be extended to nearby areas.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT Effective Interactive Multimedia delivery

Webcam as Return Link



The traditional classrooms have been replaced with the digital classrooms where the students will use laptops for connectivity between the digital board and laptop. Whatever the digital board will display that can be directly viewed on the laptop of students through the use of Software. With this there is no need for the students to take the notes instead they can concentrate on the lecture being delivered. A camera is also attached to the digital classroom, which records and stores the lecture in the server. Whenever any students want to access a particular lecture he can log on to the server from anywhere in campus and can go through the material delivered.

Web cam can be used to record video to add a more personal touch in certain types of interactions and generally enhance interest levels, but it is not strictly necessary. All this accessory equipment should be inexpensive.

Webcam is efficient, dependable and low-cost surveillance solution for education and related uses. The webcams features instant picture web server capability, which enables you to start your live streaming as soon as you give your IP address.

Webcam allows you to either keep the surveillance images private or to make them available for everybody on the Internet.

It is useful to compare our approach against satellite-based approaches. Satellite-based approaches are expensive and they require a great deal of support infrastructure. Satellites are a good broadcast medium: a small number of one-way streams consumed by a vast number of content consumers. But broadcast models are poor ways of delivering customized content and allowing two-way exchanges. Satellites can also be used to support non-broadcast or even two-way communication. If we do that, however, we face a severe bandwidth problem: each of a large number of communication channels only gets a small fraction of the aggregate bandwidth. The bandwidth limitation is especially serious on the uplinks.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT Effective Interactive Multimedia delivery

Voice Chat as Internet



The Introduction of virtual Digital classrooms as part of students' new interactive teaching system with the classrooms use a digital interactive board and all students have laptops as part of the new teaching aid. With a growing awareness and acceptance of computers and Information Technology among the students,

Voice chat requires that the caller and recipient have speakers and a microphone

The centralized data bank which could be accessed through the satellite -when configured with technological combinations - could be used for video conferencing, voice chat as internet, radio and TV broadcast, night time loading at receiving end, online education through internet, telephone and internet as return link

Internet kiosks will have facilities such as email; Voice mail are in the process of developing content in a bigger way to help the rural farmers with the support of various educational institutions.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT Effective Interactive Multimedia delivery

Asymmetric Internet through TVRO



TVRO (Television Receive Only) is an earth station or downlink capable of receiving but not transmitting satellite TV signals. TVRO (Television Receive Only) antennas help to receive programming signals from the multitude of educational programming services. You can also set up your own TVRO to receive programs directly from the satellite.

The system in which the signal is transmitted to an orbiting satellite that receives the signal and amplifies it and transmits it back to earth. Satellite TV antennas are receiving signals and converts into analog signals. Digital Satellite TV offers unbeatable value, a great selection of channels, little-to-no start-up cost, and freedom from the cable company.

Television receive-only, or TVRO, refers to satellite television reception equipment that is based primarily on open standards equipment. This contrasts sharply with direct broadcast satellite (DBS), which is a completely closed system that uses proprietary reception equipment. TVRO systems are designed to receive analog satellite signals from both C-band and Ku-band satellite TV or audio signals. TVRO systems tend to use larger rather than smaller satellite dish antennas, since it is more likely that the owner of a TVRO system would have a C-band-only setup rather than a Ku band-only setup.

The education institutions will be able to install TV Received-Only or TVRO for short, satellite systems. This will enable to receive the satellite TV service.

There are six basic components to a big dish system: the satellite dish, the feed assembly, the low-noise block downconverter (LNB), the positioner/controller, the cable, and the receiver or IRD. The first component is the satellite dish. The satellite dish is unquestionably the most visible component of a home satellite system, and can range from five feet upwards to twelve feet or larger. The "average" size for a TVRO satellite dish is ten feet, but can be smaller in stronger signal areas. Most IRDs have a built in controller for moving the dish. Some receivers require an separate controller, sometimes called a dish mover, to control the position.

Although the more expensive, solid dishes are usually better for overall reception quality, particularly with Ku-band signals. Whatever type of satellite dish, a properly peaked antenna with a dish of the appropriate size should have no problem receiving both C-Band and Ku-Band signals.

In terms of size, bigger is usually better for a TVRO system. Satellite signal strengths are almost always stronger in the center of the signal footprint, where an eight-foot dish should have no problem receiving both C-Band and Ku-Band signals. The farther from the center of the footprint, the larger the size of the dish needs to be for quality C-Band reception.

Interactivity is asymmetric when the communication paths are dissimilar as, for instance, when voice and video are outbound from the instructional site and the students return voice only. For both pedagogical and economic reasons, the flow of content is usually much heavier from instructor to the students.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT Effective Interactive Multimedia delivery

Videoconferencing



Videoconferencing technology allows people at two or more locations to see and hear each other at the same time. The Knowledge Village Videoconferencing supports effective and educational uses of videoconferencing by providing basic information about the technology and instructional applications as well as resources to help you find and collaborate with other videoconferencing teachers, librarians, and content providers.

The facilities available in the Video Conferencing Centre include:

- Rear projection screens and/or monitors
- Presenters desk
- A flexible floor plan
- A tearoom
- Infra-red (cordless) head sets for the hearing impaired or for interpretation
- Ceiling mounted microphones, PZM table microphone
- Fully interactive computer packages
- MS PowerPoint, Word, Excel
- Document camera for text and graphics exchange
- Video replay and recording
- Facilities for interpretation and the hearing impaired

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT Effective Interactive Multimedia delivery

Radio Broadcast



Radio as a powerful communication tool is long forgotten. The Radio broadcasting, called radio the 'fifth estate'. It is believed that radio is an extension of the press as far as its social functions are concerned, an effective media which can inform, entertain, enlighten and educate the masses.

Radio can cut across geographic, cultural and literacy barriers. Given its availability, accessibility, cost-effectiveness and power, radio represents a practical and creative medium for facilitating mass education in town/rural settings. Radio still continues to be an under-utilized technology in education. This is especially surprising, because from a learner's point of view, radio is user friendly, accessible and a well-established medium. From an educational provider's point of view it is easy to set up, produce and broadcast programs. After almost one hundred years of broadcasting history, most nations possess more than a respectable level of engineering skills and broadcasting talent needed to apply the technology in education.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

Knowledge Village- Interactive e-learning Solutions

e-learning is the presentation of a learning, training ,education program or knowledge dissemination by electronic means. The Interactive e-learning basically focused on increasing the quality, value & reach of education. Typically used to describe media such as CD /DVD-ROM, Internet, Intranet, wireless and mobile learning. Knowledge Management can be also included as a form of e-learning. Any learning that utilizes a network (LAN, WAN or Internet) for delivery, interaction, or facilitation.

Using Satellite based, Internet based, and interactive Multimedia (CD/DVD/WEB/KIOSK) technology to deliver knowledge to people begins a new leap in interactive e-learning System.

The prevailing trend in elearning is merely Web based Training (WBT) Computer based Training (CBT), Conversion of data (bilingual text) from hard copy to Digital formats, Online Powerpoint slides, Streaming Audio/Video lectures etc.

Mibiz Knowledge Village creates a new saga in elearning solutions: to make the Knowledge Village a 'Knowledge-disseminating hub of the World.'

Mibiz Knowledge Village Unique Features:

Mission towards Pedagogic Models – Creating, Preserving, Processing & Transmitting Knowledge

Consortium of International academic institutes

Innovation, Leadership, Investment, Entrepreneurship

Develop a larger intellectual human manpower

The role of Knowledge workers

Development of quality Research & Development

Creation of innovative knowledge products

Corporate investment in knowledge production through R&D

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

The Knowledge Village e-learning Methodology

Virtual University
Brain Theory
Content Management
Interactive Portal
Interactive Applications
Interactive Content Based Database (CD/DVD/WEB/KIOSK)
Online digital Library (e-books)
Chat
Audio / Visual Online Theatre (Video on Demand)
Tele-Conferencing
Remote Access Learning
m-learning

e-learning benefits

Broad and easy access to information
Virtual Knowledge Campus Solution
Engaging learner experience
Strategy & Program consulting
Branded educational content
Scalable Technology

Interactive e-learning Brain Theory System:
Virtual Professor
Subject Analysis
Brain Theory: (Left Brain, Right Brain)
Animations (2D, 3D)
Structural & Biological 3D Virtual Walkthroughs
Interactive pedagogical Virtual Animation Programs
3D pedagogical Virtual explorations
Interactivity
Digital Library
Virtual Interaction with 3D computer generated movies
Live sessions
Explanations & Full action Animations
Content is detailed
Overview of topics
Effective two-way communication
Synchronized Multimedia
Important terminology
Variety of Menus
Virtual Classroom
Video / Voice Conferencing
Smart Cards
Shared Whiteboards
Live Presentation tools
Application sharing
Live tests
Chat
Live Vote Casting
Boards
Maps etc.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

e-learning Architecture

Content Management
Content Development
Content Generation
Content Research & Workflow
Content Deployment
Curriculum design

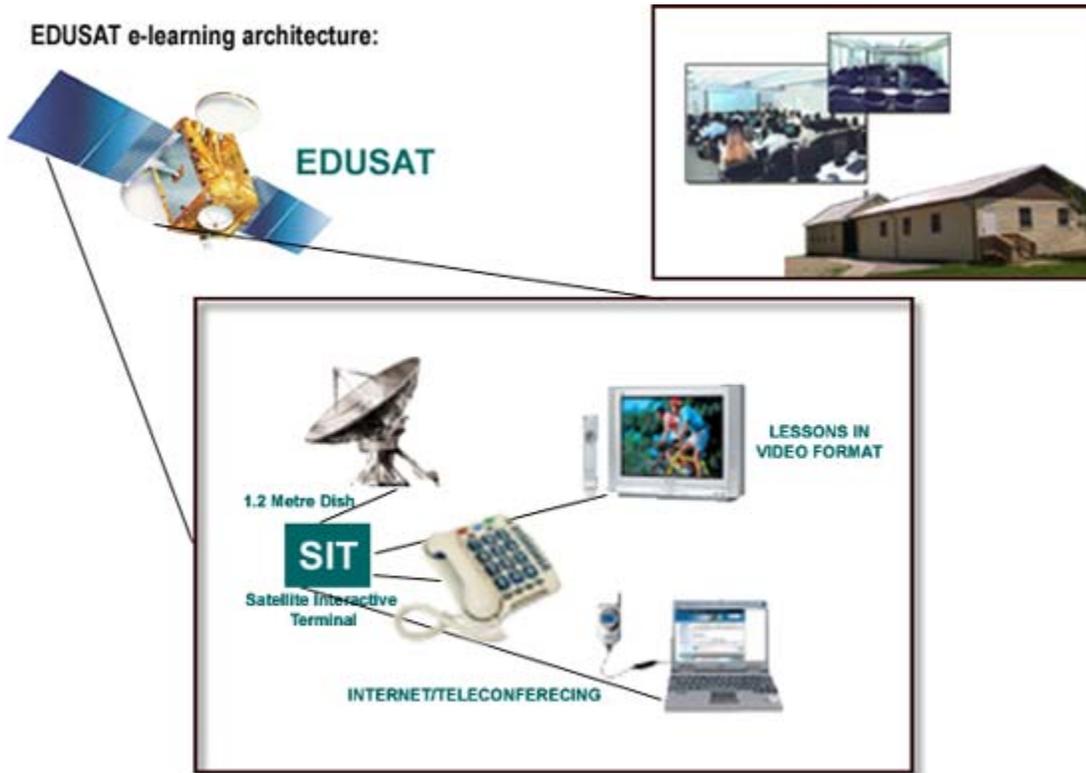
Technology
Technological hierarchy
Creation, capture & connectivity tools
Software and system management
Hardware / Platform
Technological implementation

Services
Interactivity Research
CD/DVD/WEB/KIOSK Authoring
Portals
Hosting & support
Maintenance & Assessment

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

EDUSAT e-learning architecture:



IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

Virtual University

The Virtual University is the oldest online learning community on the World Wide Web. A University, which is an accredited institution wherein all courses, is delivered by distance learning, with no physical campus. A university that caters to distance learners and that has no physical classrooms. This kind of higher education institution was created to give students the opportunity to learn wherever they may be.

Knowledge Village
Virtual Universities
Research & Development
International Academic organizations

Virtual University model

Virtual university is emerging in response to the needs of the global knowledge society, and is enabled by the Internet. The core business of universities is the creation, storage, processing and dissemination of knowledge.

Virtual University Pedagogic Models:

Creating,
Preserving,
Processing
Transmitting
Knowledge-delivery through
e-learning
Tele-education

While the modern university responded to national needs, the virtual university will respond to the needs of an increasingly interconnected, multicultural, multilingual and globalised world.

Virtual university to be one that delivers courses primarily online, that is, by networks such as the Internet or Intranets, using asynchronous technologies, such as computer or web-based technologies especially customized for education. These learning technologies enable and support active, collaborative learning approaches, and the software provides tools for:

The infrastructure of the virtual university, which is on the Internet, is the technology that makes possible telelearning, telemedicine, without leaving one's home.

But in the knowledge society, it creates problems for global education that is multilingual and multicultural in the future.

The Mibiz Knowledge Village is the governing authority of Mibiz Virtual University of Practitioners (MVUP) that engages in disseminating Medical & Health information. The MVUP (www.missionindia.biz) has incorporated Content based as Knowledge Product database on CD/DVD/KIOSK.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

Brain Theory

The Brain is a machine inside a machine. Its purpose is to propagate its genes forward in time. To do this it must survive in and interact with the external world. The key to understanding what role different parts of the brain play in this process is realizing that structures that are anatomically and physiologically homogeneous perform the same neural operation throughout the structure.

Brain Theory states that our brain has two hemispheres (commonly called the right brain and left brain), which think in different ways. Our right brain is visual and processes information by looking first at the whole picture then the details.

The cerebral hemispheres are divided in half into a right hemisphere and a left hemisphere. Sensory information goes to the opposite hemisphere, so the right hand sends information to the left hemisphere and the left hand to the right hemisphere. Some brain functions are performed almost entirely by one hemisphere and this is called lateralization. The left hemisphere is said to specialize in detailed analysis and logic and language and the right hemisphere in holistic processing and nonverbal skills such as face recognition and the appreciation of music.

Our left-brain is verbal and processes information by looking first at the pieces then putting them together to get the whole. Our right brain is more intuitive; our left is analytical and sequential.

Although some functions are lateralized, the two hemispheres are in constant communication via a thick band of 200-250 million nerve cells called the corpus callosum. The two hemispheres work as a team rather than in isolation. Also, lateralization is not the same in everyone. In 95% of right-handed people and 60% of left-handed people the left hemisphere is dominant for language, but some people use both hemispheres for language or are right hemisphere dominant

Knowledge Village brings out a fusion with Medical Science & Information Technology with the aid of interactive Multimedia Solutions to solve the riddle of the mystery of the evolution of the Nervous System with Computer Generated Graphics.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

Mission CD/DVD Authoring India-2003

Technology Information, Forecasting and Assessment Council (TIFAC), an autonomous organization under the aegis of the Department of Science & Technology (Govt. of India) plays a vital role in technology development and promotion in India through its various programs.

The TIFAC Report states "CD-ROMs with storage capacity of 1.6 GB of data have been instrumental in fast information retrieval and access. Use of multimedia for storage of text, graphics, video, sound etc. has immensely benefited the information storage system"

<http://www.tifac.org.in/>

TIFAC, an autonomous organization under Department of Science and Technology chaired by Dr. R. Chidambaram, (Former Chairman, Atomic Energy Commission & Secretary, Dept of Atomic Energy) Currently DAE Homi Bhabha Chair Professor, Bhabha Atomic Research Centre (BARC) Trombay, Mumbai, aims to keep a technology watch on global trends and Formulating preferred technology options for India. TIFAC was established with the following objectives: Undertake technology assessment and forecasting studies in selected areas of national economy. Watch global trends and formulation of preferred options for India, Promotion of key technologies, and Provide information on technologies

The Project Report states "This is an honest attempt on my part to convert manually entered data into a word-processing/ spreadsheet/graphics/Animations/Walkthroughs/Interactivity software package that can be stored on a CD/DVD (Authoring), as a mission for implementation of e-learning. Once the automation of the process is complete, it will result in the fast study of data and cost cut down also. I am providing suggestions and Solutions in the Software development (CD/ DVD Authoring) side that will boost India one or the other day to a success story. Since the scope of the Project report is a vast one, what I will be trying to do is try & implement as many modules [of the Project Report] as possible. "

Table of Contents

Technology and Us
Building Data Dictionary e-book
Case study Manual v/s Digital Publishing
Case study of Floppy v/s Hard Disk (HDD)
Mainframes
Case study of CD v/s DVD
Solutions – Authoring System –ease to study
Reliability
Platform Independency
Resource Management
Up gradation required sectors
Presentation of the Nation
Human Resource Management
Expenses – Cost cut down, Problems
Graph: Project Implementation (2003 – 2010)
Hardware & Software Requirements
Software Study
Authoring
Interface
Interactivity, Behaviors, Library Palette
Lingo Source Code
3D Lingo Source Code
List Source Code
Import & Export Features
Autorun
Reference Books + CD's
Conclusion

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

Research: Information Technology (IT) & Information Technology Enabled Services (ITES)

As we all know computers hold sway in today's world. Rarely do we come across an area in the realm of business that has not been bitten by the computerization bug. In fact all sectors- small scale, large scale, government or non-government sectors are slowly getting computerized in this fast moving world of ours which is galloping fast towards an era in which e-learning, e-business, m-commerce, Embedded Systems- Smart Cards, GPS, KIOSK is to be the buzz-word.

Information technology plays a key role in helping organizations achieve profitable results and keep competitive forces in check. Information technology (IT) or information and communication technology (ICT) is the technology required for information processing. Information technology provides the means for collecting, storing, encoding, processing, analyzing, transmitting, receiving, and printing text, audio, or video information. With the use of electronic computers and computer enabled software's to convert, store, protect, process, transmit, and retrieve data / information from anywhere, anytime.

Information Technology & its enabled services involve computers, software, and services, but good IT synthesizes these elements with a concentration on how your organization can best meet its goals. Increasingly, the IT department is the hub of any organization / Architecture. Hence the requirement of updating with Research is vital.

A Research unit is vital for forecasting the innovations in the sector adds the glory.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

Research: Biotechnology (BT)

Biotechnology (BT) is a collection of technologies that capitalize on the attributes of cells, such as their manufacturing capabilities, and out biological molecules, such as Deoxyribonucleic acid (DNA) and proteins to work for us.

The application of biological research techniques for the development of products, which improve human health

Biotechnology will help improve our ability to customize therapies based on individual genomics; prevent, diagnose, and treat all types of diseases rather than rely on rescue therapy and provide breakthroughs in agricultural production and food safety.

The industrial application of living organisms and/or biological techniques developed through basic research. Biotechnology products include pharmaceutical compounds and research materials.

The Congenial atmosphere of Biotechnology for a nation and the efforts of the scientists, researchers, engineers and technicians in fields that include drug development, medical diagnostics, biomedical engineering, forensics and environmental will play a vital role in the development of Biotechnology innovations. Efforts to build a leading state-of-the-art infrastructure for the advancement of biotechnology are vital.

Biotechnology consortium should be developed that combines government, academia and the private sector together in close working relationships.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info

Research: Nanotechnology (NT)

Nanotechnology (NT) is a branch of science and engineering devoted to the design and production of extremely small electronic devices and circuits built from individual atoms and molecules. It is the creation of materials, devices, and systems through the manipulation of individual atoms and molecules.

The original definition is technology that is built from single atoms and which depends on individual atoms for function. A technology that creates small materials at the scale of molecules by manipulating single atoms. The name nano comes from the size of molecules, which is measured in nanometers - or one billionth of a meter (0.00000001 meter). The dimension of single atoms is ten fold smaller.

Nanotechnology -- the manipulation of atoms as raw materials -- will eventually live up to the hype it's received for it's potential to advance medicine, electronics and manufacturing. From helping diagnose diseases more accurately to keeping computers running more smoothly, the manipulation of atoms is a challenge with a whole new set of rules. The scientists who work with these tiniest of raw materials see a world just as mesmerizing as those who study the farthest reaches of outer space.

While nanotechnology has made great advances in the last two decades, it has yet to fulfill its ultimate potential. The computer circuits have been getting smaller. Chemicals have been getting more complex. Biochemists have learned more about how to study and control the molecular basis of organisms. Mechanical engineering has been getting more precise.

IMPLEMENTATION OF MIBIZ KNOWLEDGE VILLAGE

www.knowledgevillage.info



KNOWLEDGE VILLAGE

Trivandrum- 695561

Kerala, India

Tel: + 91 0 9387822966

Url: www.knowledgevillage.info

E-mail :info@knowledgevillage.info

Chat:(Yahoo/Hotmail/Skype) mibizreji