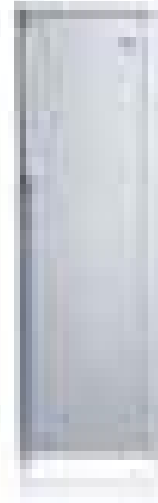
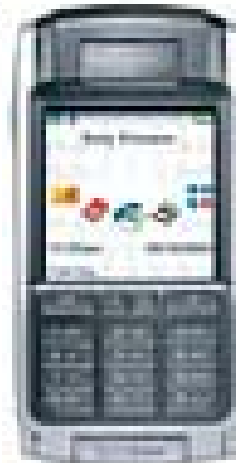




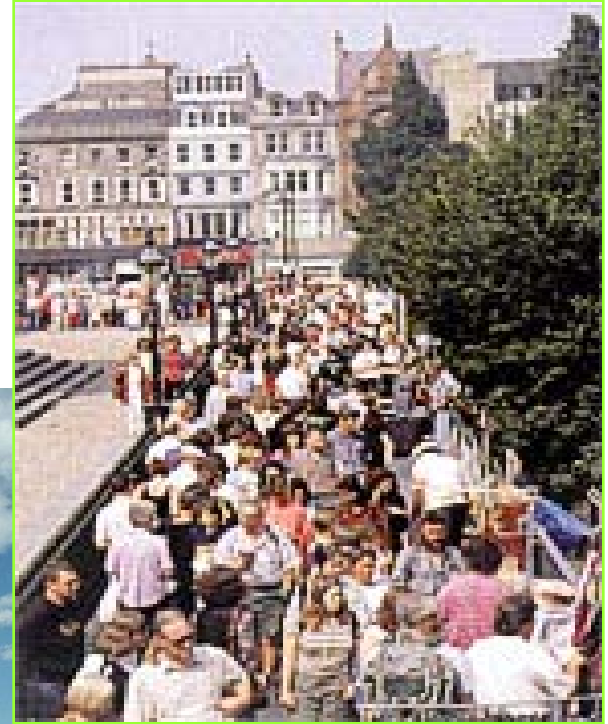
Multimedia Content

Vital element for Technology Aided Education

Technology has changed our lives

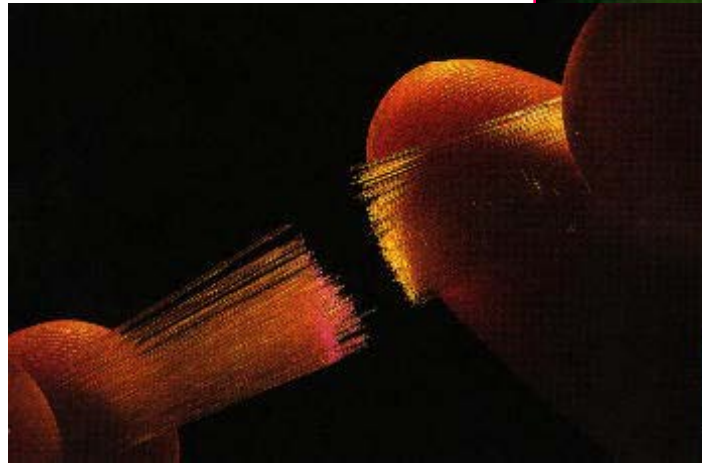


..... *The way we live*



.... *The way we communicate*

An early telephone design.



... The way we cook



..... The way we Travel



But, our classrooms.....??????



remaining unchanged over decades

Where the teachers talk most of the time....



Where the students listen most of the time



Where learning is a rote memorization process.....



Pedagogical changes by IT @ School

- ***through the profound use of technology in class rooms***
 - ***as a powerful tool for teaching /learning***
 - ***by empowering the teachers***
 - ***by enhancing the capacity to learn***

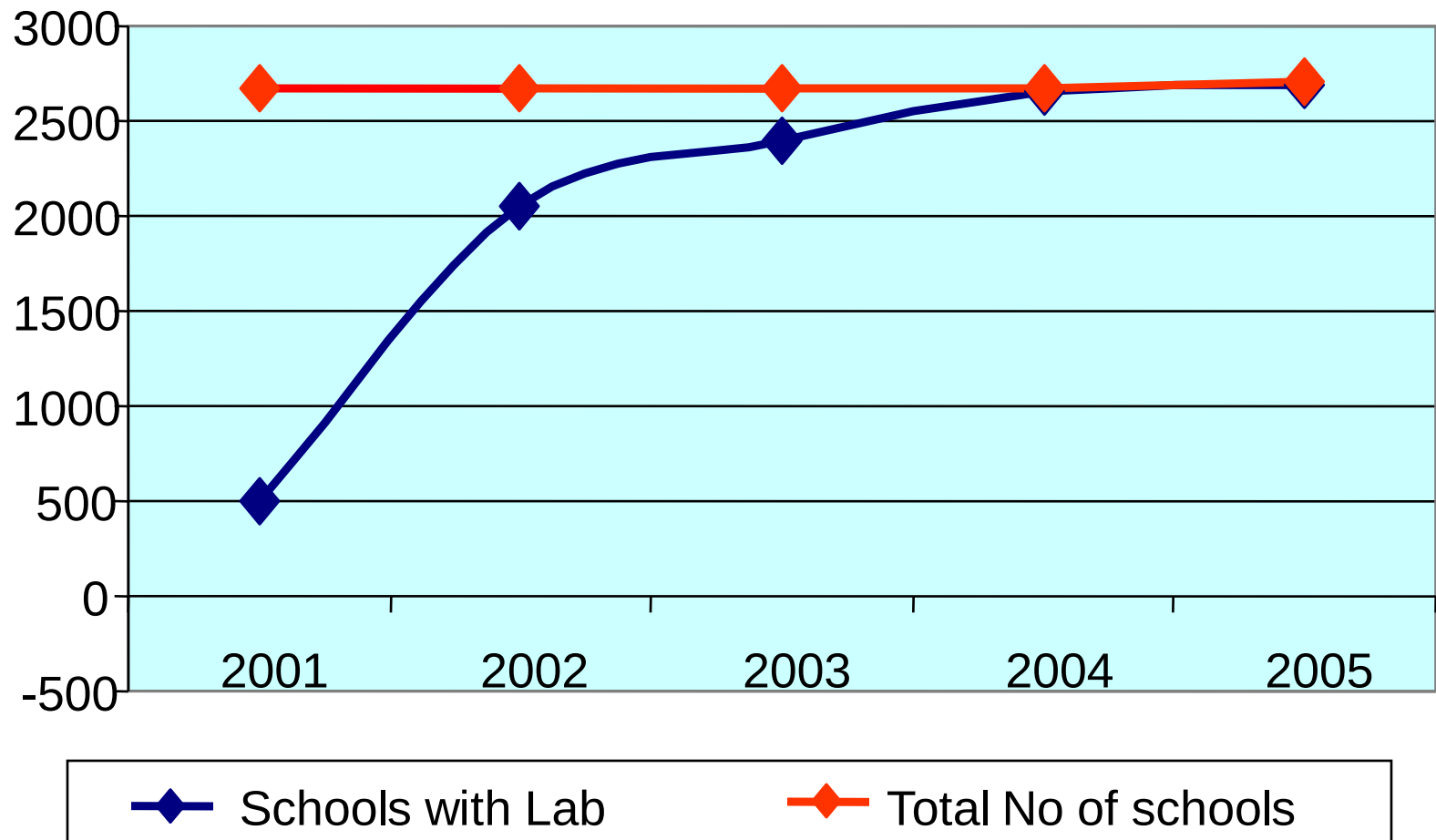


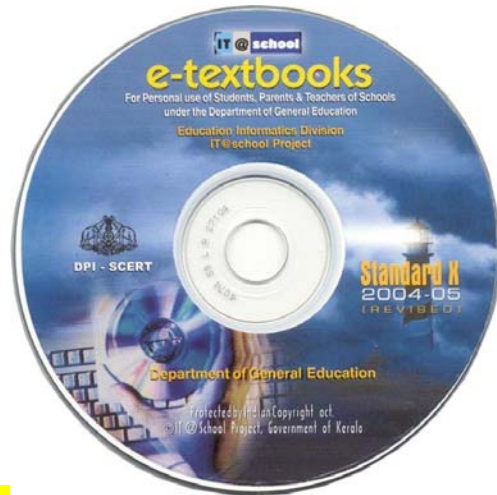
Catering.....

- ***2800 High Schools***
- ***16 lakh Children***
- ***54,000 teachers***

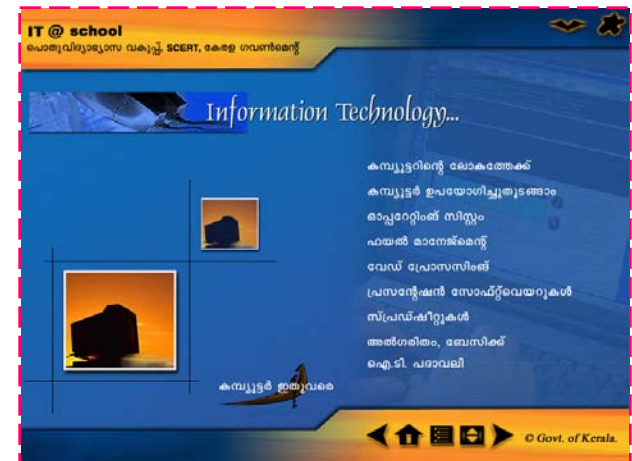


GROWTH OF COMPUTER LABS IN FIVE YEARS





EDUCATIONAL CONTENT MATERIALS



IT @ school Softexam 4.2

- **Conducted IT Practical examination in S S L C for the first time for 5 lakh students last year and repeated this year also raising the marks from 5 to 20**
- **Using Innovative Product Softexam**





Technology Interventions in Schools of Kerala



The Initiatives



- **Radios - 1960s & 70s**
- **RCCPs – Late 70s**
- **16 mm Projectors – 80s**
- **Color TVs and VCPs -90s**
- **Computers – 1985 Onwards**
- **Multimedia Projectors – 2003 onwards**
- **ROTs -2005 onwards**





**VIRTUAL CLASSROOM TECHNOLOGY on EDUSAT
for RURAL SCHOOLS**

State Uplinking Station at Gorkhy Bhavan Thiruvananthapuram



VICTERS - *Status*

- *75 interactive terminals*
- *13 interactive terminals in Lakshadweep*
- *Over 800 Receive Only Terminals*
- *818 ROTs being set up*
- *To cover 12500 schools in one year*



Interactive Channel...

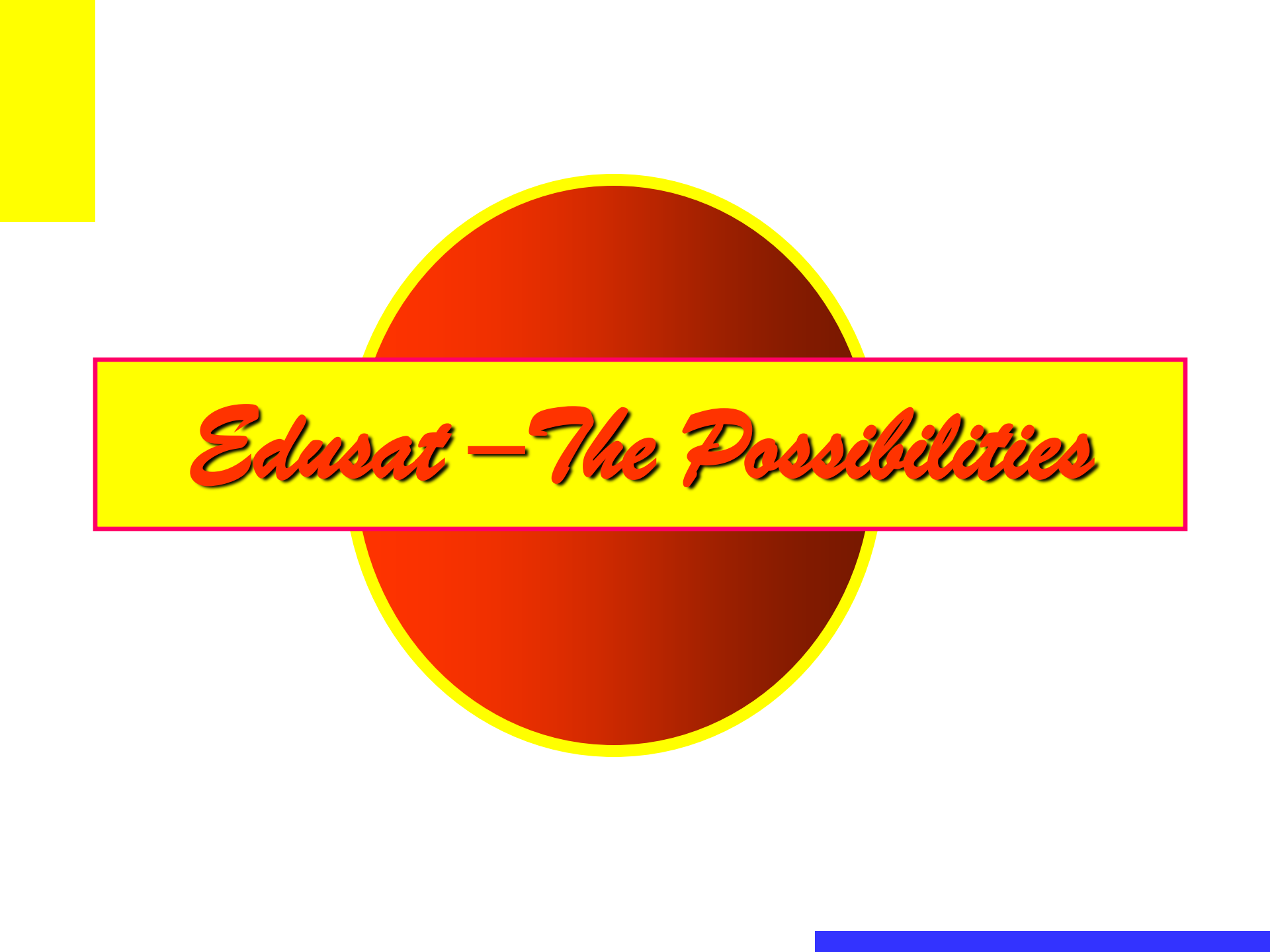
- ***Inaugurated by HE President of India on 28th July 2005***
- ***Interactive channel used for Teacher Empowerment***
- ***Over 22,000 teachers trained so far***
- ***Conducts departmental conferences and reviews regularly***



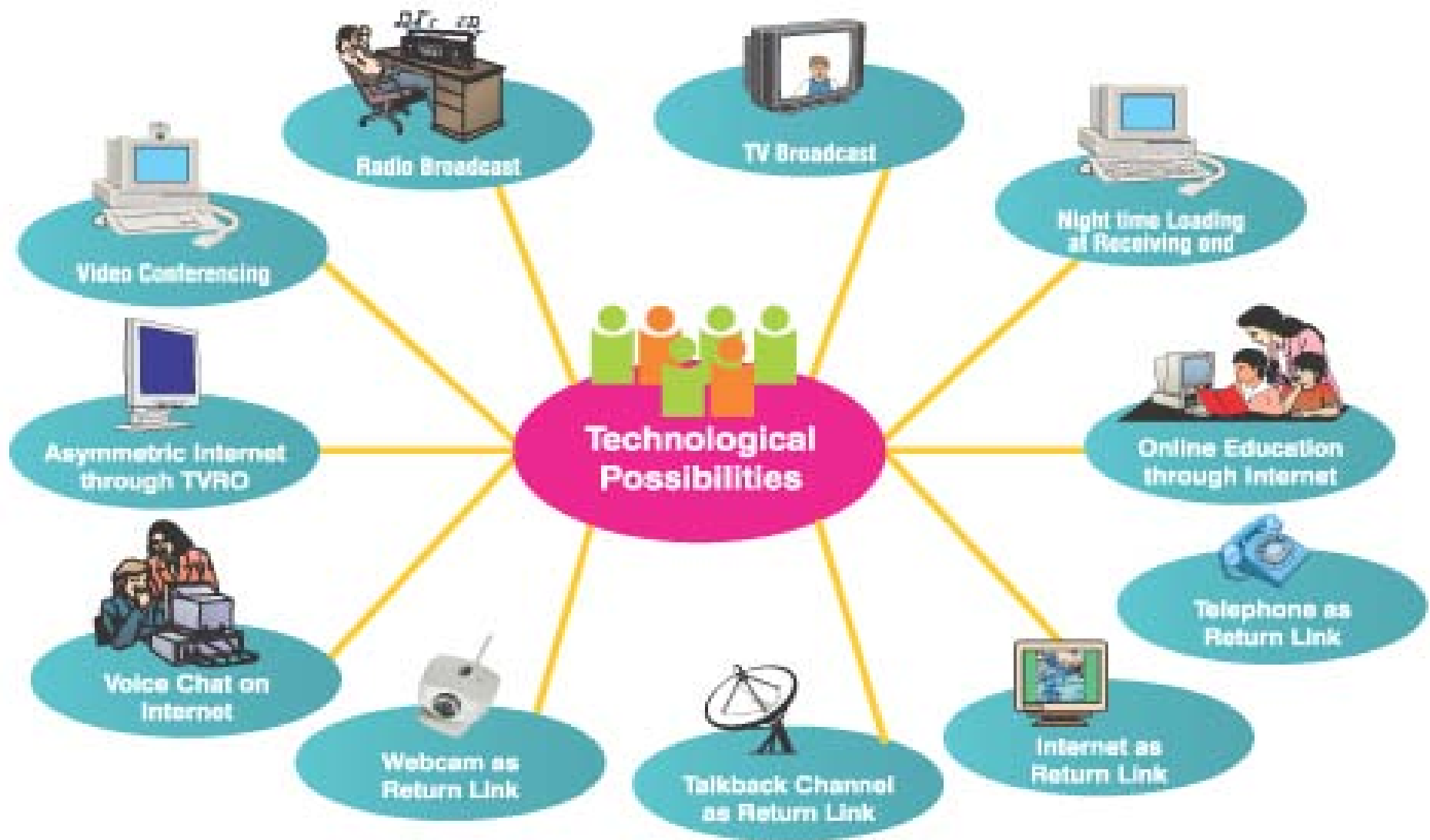
Non-Interactive Channel..

- *Inaugurated by Hon.CM of Kerala on 3rd August 2006*
- *Kerala's first education channel*
- *Telecasts programme daily from 9am to 7.30pm*
- *Content supplied by SIET, CDiT, Doordarshan, RIE,...etc.*



The background features a large red circle with a yellow outline, centered on the slide. A yellow horizontal rectangle with a red border is positioned across the middle of the circle. The text "Edusat – The Possibilities" is written in a red, italicized, cursive font within this rectangle. There is a solid yellow rectangle in the top-left corner and a solid blue rectangle in the bottom-right corner of the slide.

Edusat – The Possibilities



Potential uses of EDUSAT

EDUSAT - Bridging the Divide



*Moving towards
Technology Enabled Education...*

The need for IT enabled education...

we retain

10% of what we read,

20% of what we hear,

30% of what we see,

50% of what we see and hear,

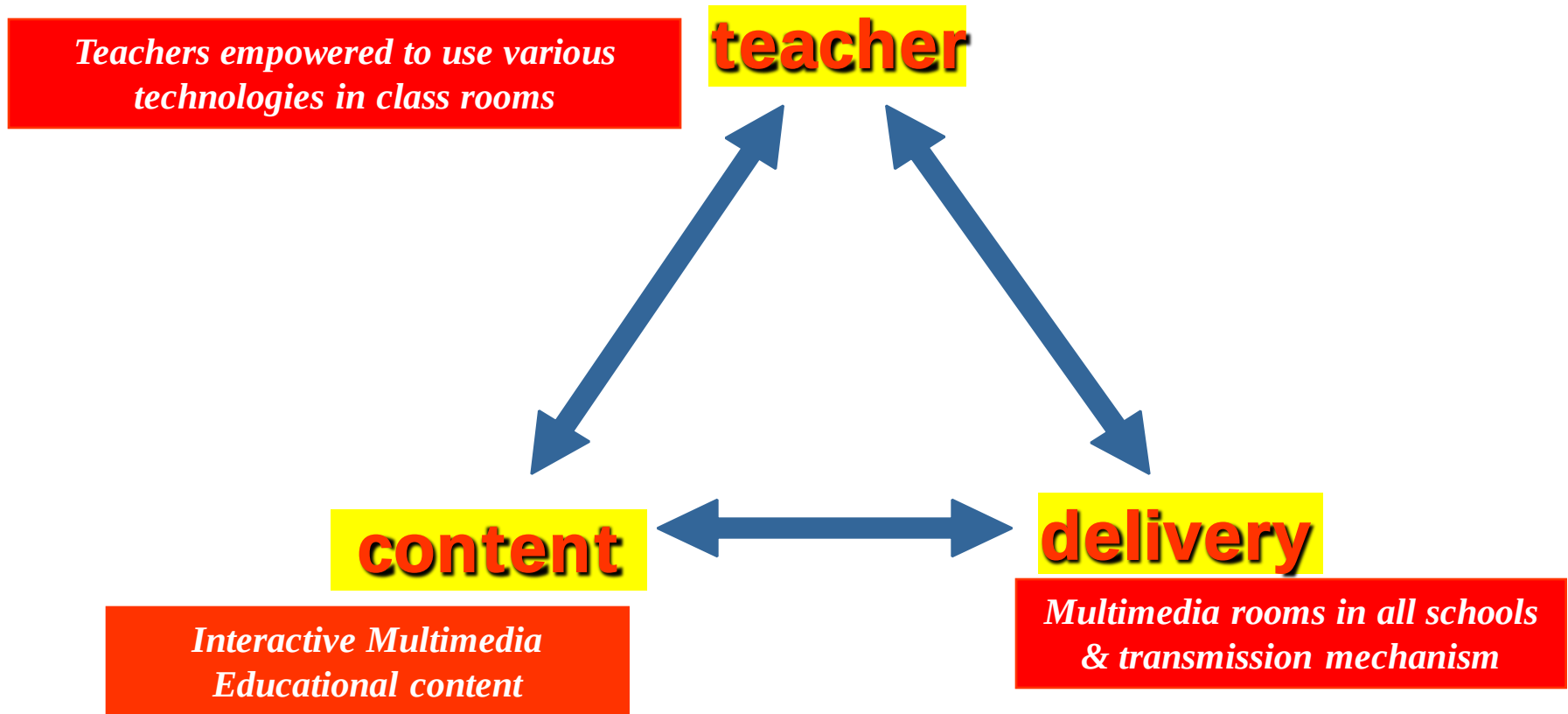
70% of what we say and

90% of what we say and do.

-- the British Audio Visual Society

Major Impediment
SHORTAGE OF CONTENT

IT enabled Education – the Key Components



Content issues - requirements

- *To be Customized for Kerala Curriculum*
- *Four media of Instruction*
- *To be developed as*
 - *Teaching tool*
 - *Self learning tutorial*
 - *Links to internet*
 - *Child friendly*
 - *Evoking curiosity*
 - *Challenging*
 - *Infotainment*

Content issues

- *End User expectations not understood fully*
- *Factually incorrect materials*
- *Communication gap between teachers and developers*
- *Reluctance of teachers to use technology in class room*
- *Indifferent attitude of school heads*
- *Lack of parental awareness*
- *Long duration to Generate*

Content — technical issues

- *Different operating systems*
- *Obsolete computers (for Multimedia)*
- *Inadequacies in computers*
- *Inadequacies in projection/delivery systems*
- *Inadequate power and other related issues*
- *TV based content requires special attn.*
- *Bad acoustics of class rooms*

Content —tech. requirements

- *IPR allowing free replication by users*
- *Common Operating platforms (java etc)*
- *Browser based content ideal*
- *3 D animations preferred*
- *Teaching mode*
 - *Graphics more*
 - *Font /label size large*
 - *Mute facility*
- *Self Learning mode*
 - *Self evaluation at end of every session*
 - *with cumulative scores*

Content — tech. requirements

- *Content to be used*
 - *thru TVs*
 - *Using computers*
 - *Along with Black board*
- *Virtual lab mandatory for science*
- *To run in two modes*
 - *From CD*
 - *From HDD*

- *Organization of links*
 - *linear + hierarchical*
- *Navigation*
 - *Text book based*
 - *Hard spot based*

**Language → Standard →
Subject → Chapter → 'text'
or 'hardspots'**

Content for
Edusat-VICTERS

EDUSERVE

- *One stop point for teachers, students and parents of Kerala*
- *To be integrated with*
 - *State information infrastructure*
 - *K-SWAN*
 - *EDUSAT-ViCTERS*
- *Distributed servers*

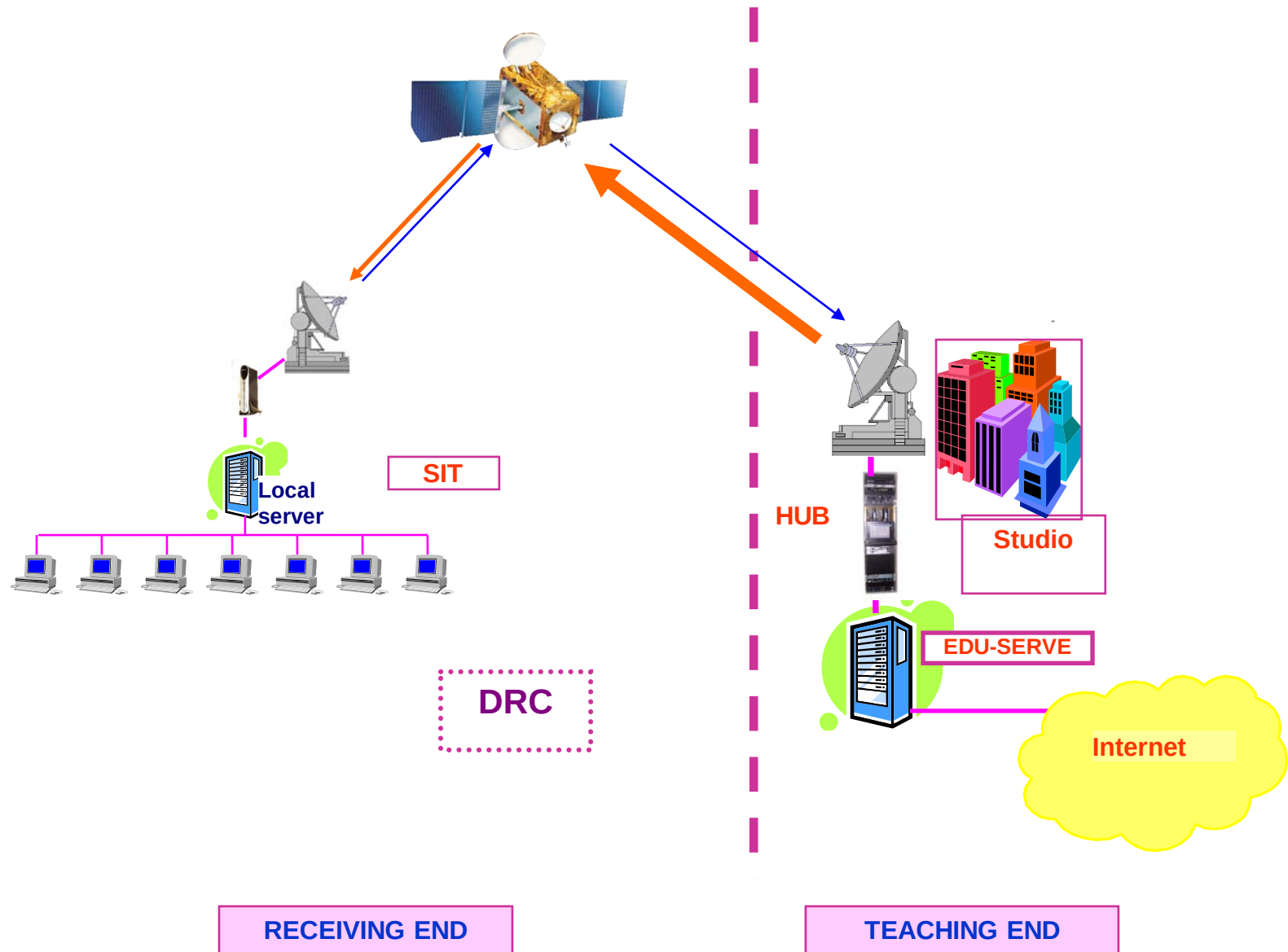
SERVICES OFFERED

- *Repository of multimedia content*
- *Library of subject specific sites*
- *Infotainment content*
- *Messaging system*
- *Interface for stake holders*
- *Self Hosting Of School Websites*
- *Feedback mechanism*
- *NIGHT TIME LOADING*

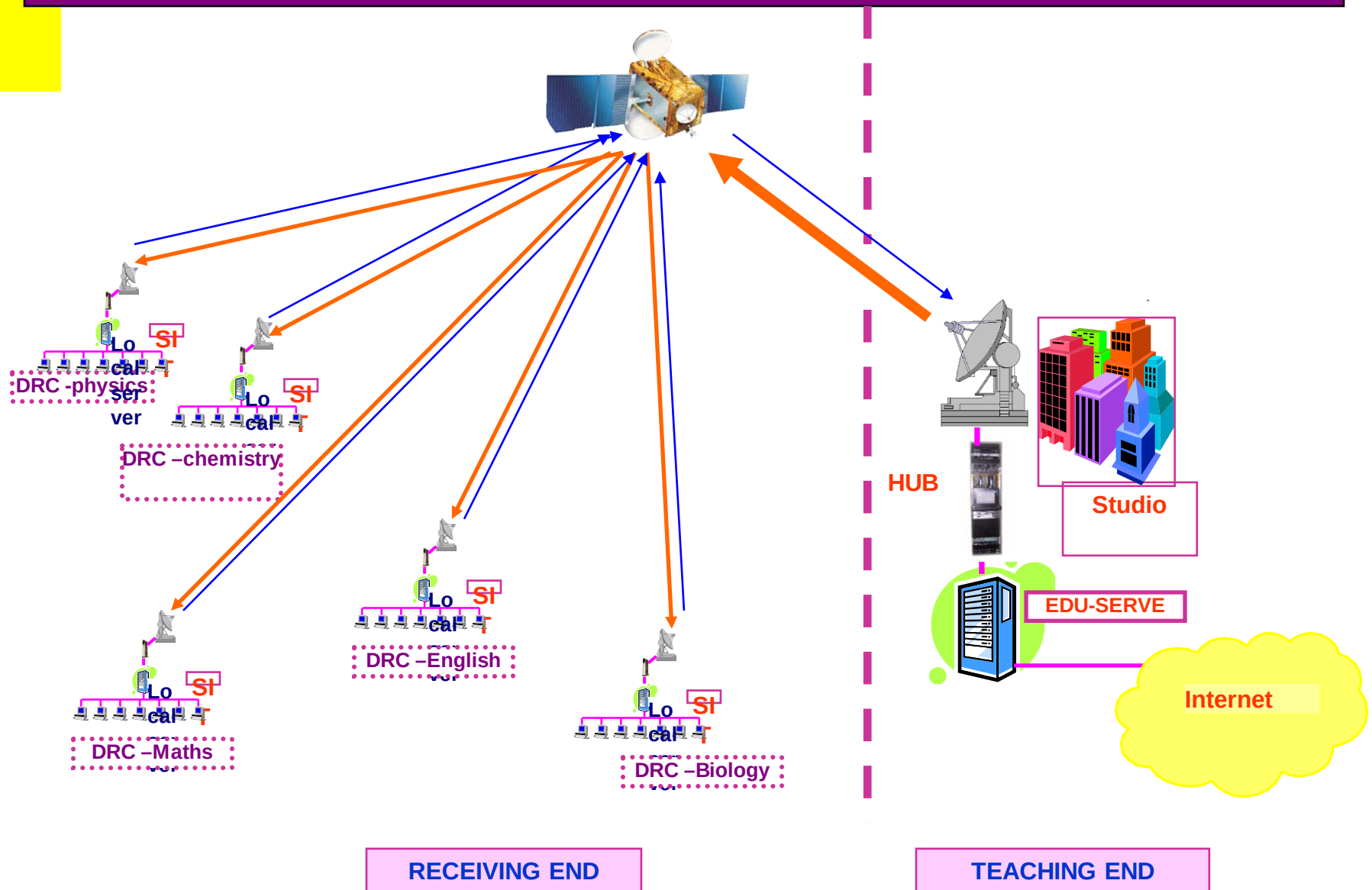
SERVICES OFFERED

- *Automated Career counselor*
- *CLEAN INTERNET*
- *General Education Management System*
 - *School Information System*
 - *Messaging solutions*
 - *Inventory management*
 - *Students data updation*
 - *Digital certificate verification*
 - *Students performance monitoring system*
 - *scheme monitoring systems*

EDUSERVE –on line training



On line training in different subjects



The Non-Interactive Channel

Kerala's Peculiarities-

- *No teacher shortage*
- *No need to replace the teacher*
- *Virtual classroom technology needed only in remote places like Attappady*
- *Lakswadeep to benefit most*

Content in Non-Int. Channel - Challenges

- *5 lakhs children (avg) in a class*
- *Need repeat telecast*
- *Informing the schedule in advance difficult*
- *Mere title of the programme insufficient*
- *Untrained teacher remain mute spectator*
- *Teachers to lose interest if no role given*
- *time insufficient to cover 10 subjects X 12 stds during school time*
- *First period problem*
- *School timings vary*

Other Major issues

- *Power failures or insufficient power*
- *Damages and maintenance of the equipments*
- *Heavy Rain Related problems of KU-band*
- *Signal strength low in Tree covered areas*
- *Position of TV in class room*
- *Small size of TV screen*
- *No facility to watch outside school hours*

BIJU PRABHAKAR

Dy. Collector

Thiruvananthapuram Collectorate

***(Founder Executive Director
IT @ School Project-ViCTERS)***

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For more details

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