Rural Telecommunications (2) Historical Aspects – Missing Link -

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Reading Assignment

Report of the Independent Commission for Worldwide Telecommunications Development "The Missing Link," December 1984.

- http://www.itu.int/osg/spu/sfo/missinglink/index.html

- Read page 1-70 of the above document. Consider the answer to the following questions while reading:

  1. What are the roles of telecommunications? After 27 years, what are new and obsolete roles?

  2. Itemize the issues about the telecommunications development.

  3. List the available technologies to solve the problems. After 27 years, what are the significant changes?

What is "Missing Link"?

- Report of the Independent Commission for Worldwide Telecommunications under ITU (International Telecommunication Union) in 1984.

  – ITU is the oldest organization in UN.

  – In charge of telecommunication standard and regulations.

  – ITU-T (telecommunications - wired), ITU-R (radiocommunications), ITU-D (communications development)

Two types of standards: de-facto and dejure

What is "Missing Link"?

- Call for decisions at the highest political level.
  - Developing countries can set target, e.g. percentage of their GDP to invest in telecommunications
  - Extension of telecommunication services to rural and remote areas.
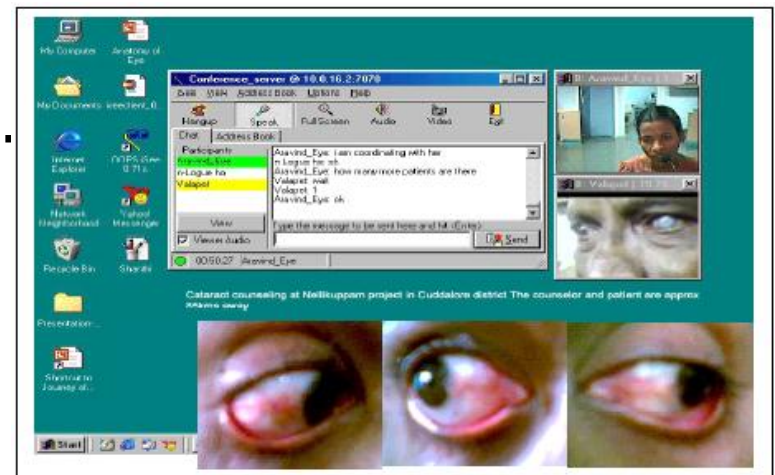 - Sharing of experiences.

Role of Telecommunications (Question 1)

- Existence of an efficient telecommunications system confers direct and indirect benefits.
  - Emergencies and health services
  - Public administration, commerce and other economic activities
  - Reduction of need to travel, and better use of existing transport facilities

Emergencies and Health Services

- 5% of calls from rural and remote
  - India, Costa Rica, Egypt, Papua New Guinea
- Communicable disease
  - Cholera, dengue fever, …
- Natural disaster
  - Typhoon, earthquake, …
- Medical services
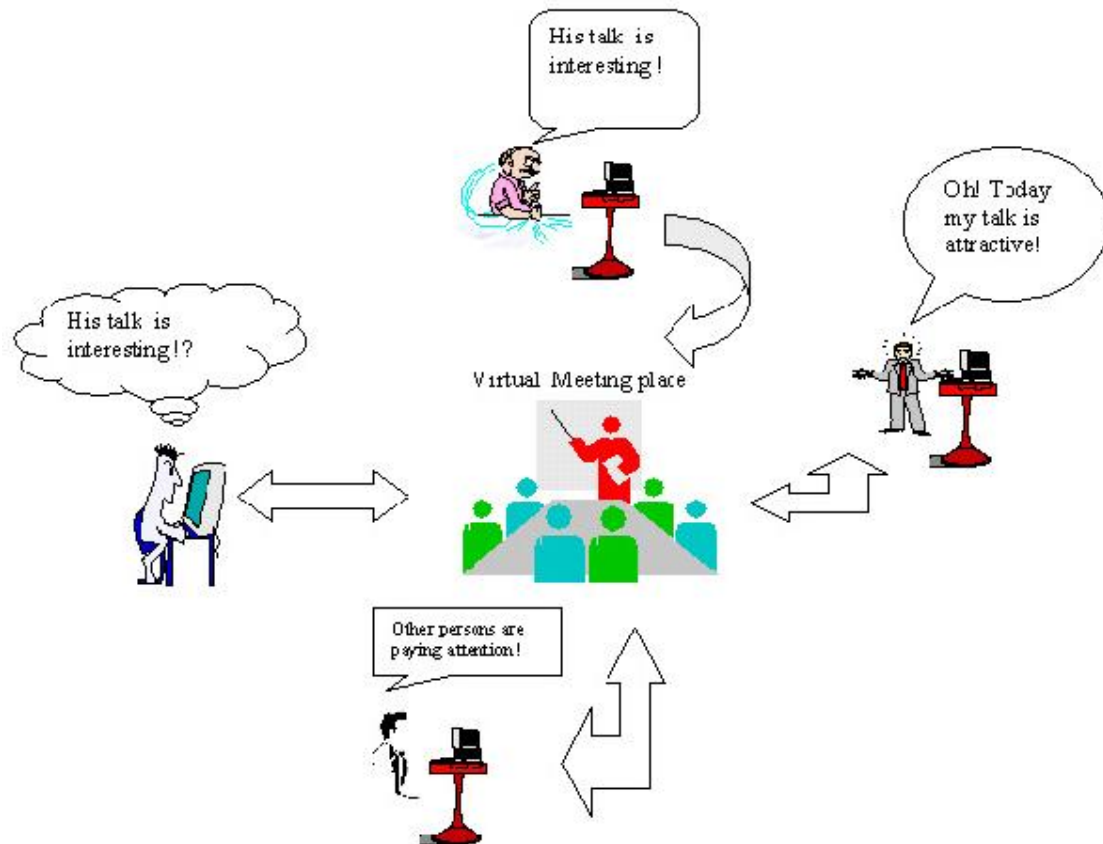 - Delivery of drugs
  - Flying doctors

Public Administration, Commerce and Other Economic Activities

- Tenders saving cost over standing order
- Market price of products in the city
- Economic activities – examples in Kenya "Loss w/o telecom = 110 x cost of telecom"
  - Hotel and travel agency
  - Biscuit maker
  - Freight shipper
  - Vegetables and flowers exporter
- Attraction of commercial and business enterprises

Reduction of Need to Travel

- Over the travel, long distance call can save
  - Money
  - Time

Telecommunications in Development

- Other factors and infrastructures
  - Good administrations
    (to be also achieved with telecom)
  - Transportation

Situation in 1984

- Major services
  - Telephone
  - Telex
  - Data service
- Personal computers
  - Still very rare and expensive
  - Mainly for hobbiest
- Size of services
  - 600 million telephones
  - US$250 billion revenues / year

Digital Communications

- Efficient use of spectrum
- Noise tolerant
- Error detection and correction
- Integration of several services together
- Simplification of hardware (incl. network)

What have changed during 27 years? (input from students)

- Internet is spread
  - Shift from analog to digital
  - High data rate
  - Change of services to data oriented
  - Easy access to information
  - Low cost
  - Form of revolution: Facebook, Twitter, ...
  - Web 2.0 by O'relly
- Change of perception from luxury to necessity
- Mobile (personal) phones

What have changed during 27 years?

- Emergencies and health services
  - Police information
  - Early warning system earthquake/tsunami
  - Medical consultation: video, web
- Public administration, commerce and other economic activities
  - Outsourcing: calling center
  - Online transactions; e-commerce, e-trading
  - Online marketing; individual business/SOHO
- Reduction of need to travel, and better use of existing transport facilities
  - Distant learning
  - Teleconference; video conference; teleexsistence
  - Online interview