Innovations towards Rural Health Care:
some efforts of TeNeT / RTBI, IIT Madras

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It Started with a email in 2000

- A email arrived from a Internet kiosk in a remote village:
  - A potential epidemic of Chicken Pox

- Instant response from the Government Doctors
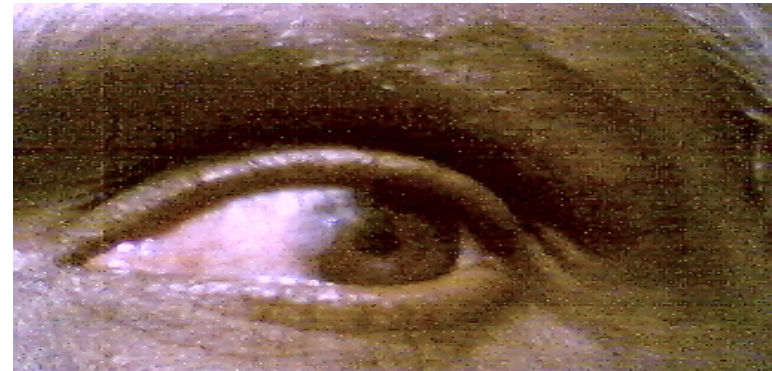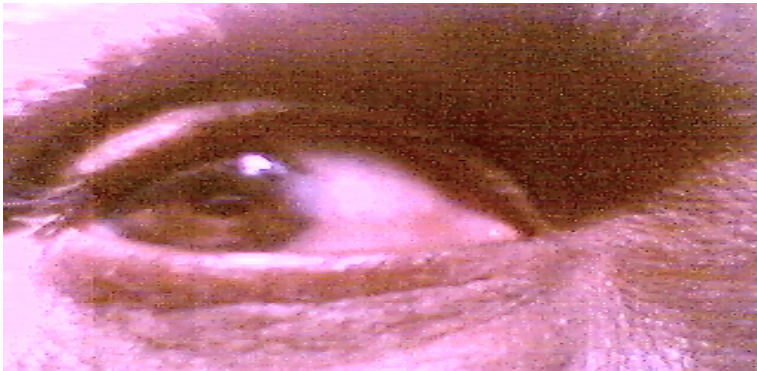
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Eye-care followed

▸ Large percentage of blindness in India is due to cataract: curable

  ▸ Screening Eye camp for outreach

Till recently Eye Ailments that could only be detected this way…

▸ Palaniammal, a 60 year old woman in Melur

▸ web camera photo: Remote feedback by Eye hospital

- ▸ And finally to video conferencing

  - ▸ also a Online Patient database created
    - ▸ for patients to register in advance
    - ▸ to help the hospital schedule and track the patients
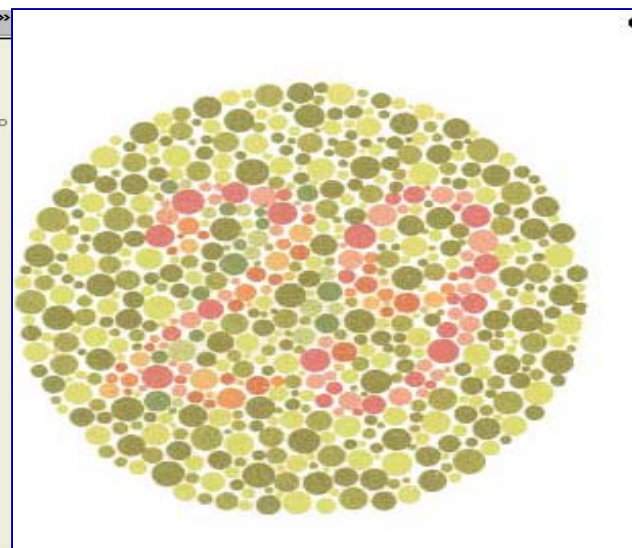
- ▸ A computer test for colour blindness added

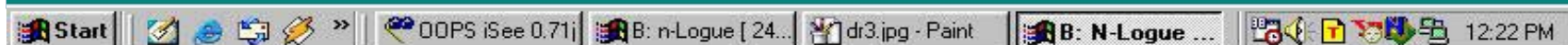# Video Conferencing continued

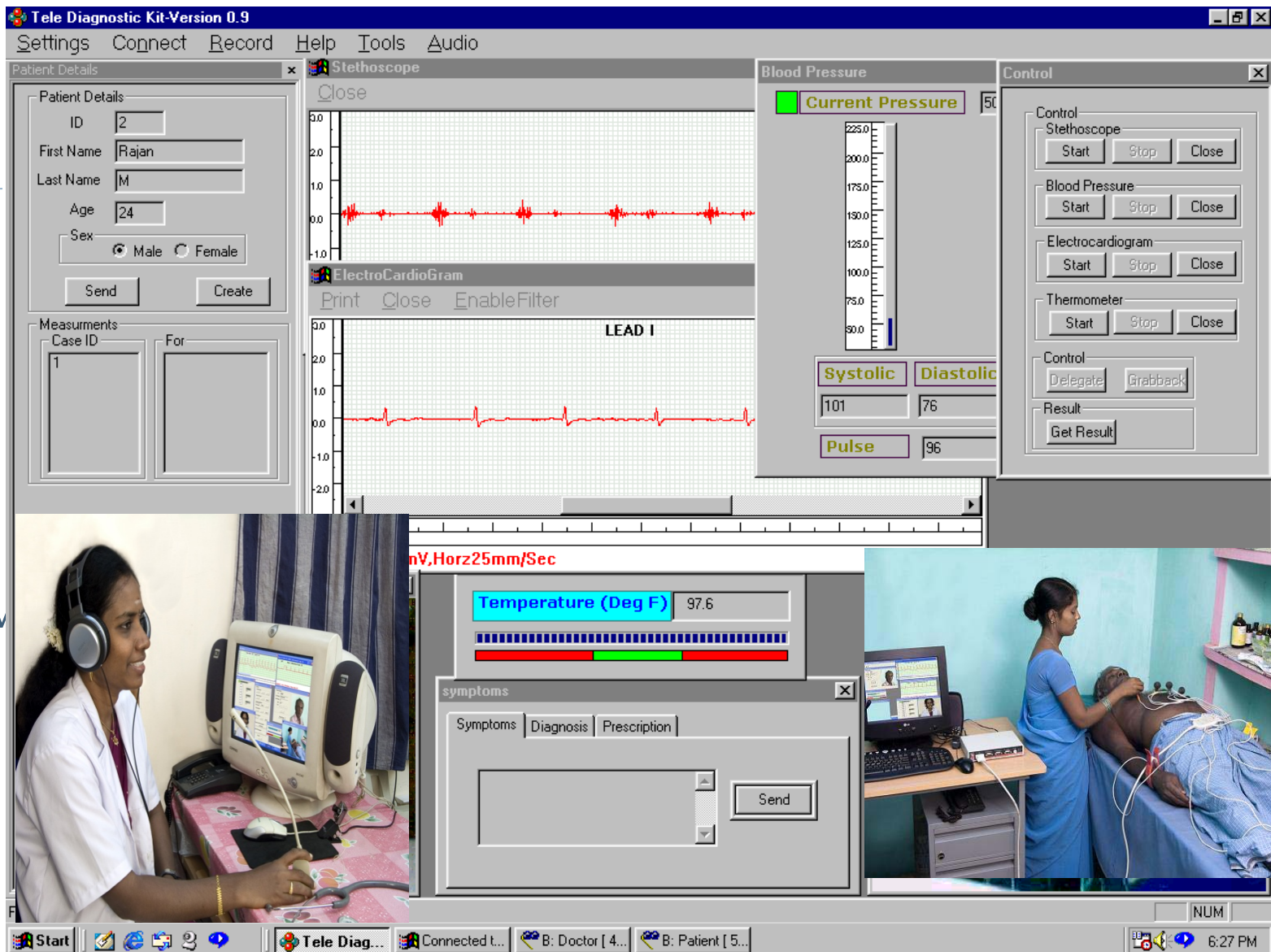
- but now with Veterinary doctors

- and then moved on
  - to video-consulting for GP, gynecology and pediatrician problems

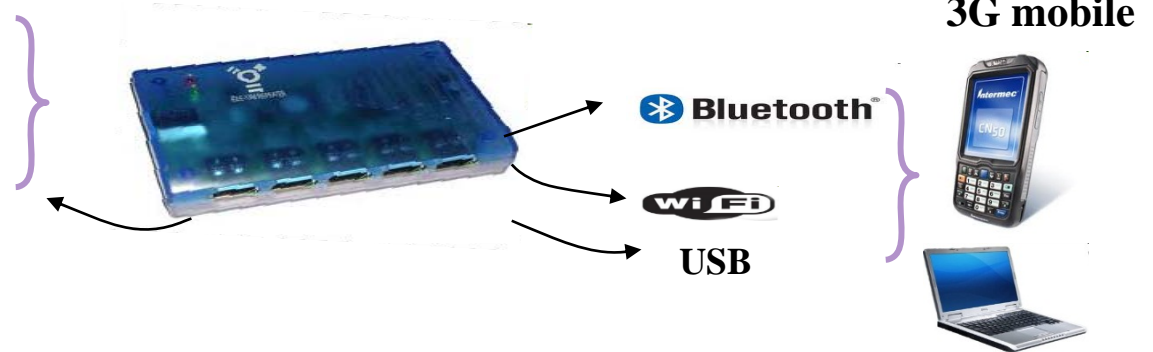A Heart patient from Melur (about 600kms From Chennai) being counsulted by Cardiac surgeon.

Remote Medical diagnostic kit (ReMeDi) consisting of BP, temperature, ECG measurement & stethoscope at just Rs15000

Now a New ReMeDi Telemedicine Kit

- BP, Temperature,
- Stethoscope, ECG
- Digital microscope
- Spiro meter
- EYE-Slit Lamp

3G mobile

Bluetooth

wi-fi

USB

- DSP platform for efficient data and image processing
- Data from Rural Patient transmitted to Doctor using 3G mobile / Bluetooth

- Yet, the progress has been Slow
  - Business model still fragile

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First Care Health: leveraging RHP

▸ Attempt to Leverage potential of existing RHPs through ICT to improve rural health outcomes

▸ Rural Healthcare Providers
  ▸ Diverse paramedical and alternate healthcare backgrounds
  ▸ Diploma/ cert in an alternate system (Sidha, homeopathy, naturopathy) , lab technology, pharmacy, Vocational nursing

▸ Why them?
  ▸ Primary Contact: Acquired trust of local people
  ▸ Consistent Presence and Availability
  ▸ Understands the cultural and economic dynamics of people

▸ What do they need?
  ▸ Training (do's and don't)
  ▸ Linkages to doctors for consultation
  ▸ Linkage to Labs for testing
  ▸ Medicine Basket
  ▸ Patient health record on cloud using mobile

First-care: Village Health Practitioners

Pilot in 35 villages in a district

RHPs chosen by polling villagers

High enthusiasm to learn and comply

   clear benefit in practice

Discontinued as RHPs are not recognised

basic Lab tests training

Online Modules

An RHP learning computer use from a kiosk operator

An RHP with her own system, studying one of First Care's distance modules.

Medicine Supply

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Monitoring Mother and Child Care Programs

- Integrated Child Development Scheme: nutrient-supplement to children based on weekly monitoring child's growth
  - Program marred by absenteeism and corruption
  - Monitoring using a simple phone at health centers
    - Unique authentication of mother using voice-authentication
    - Using voice recognition to capture Child growth and supplement obtained using mother's voice
  - Piloted in Dhar and Gunawat districts of Madhya Pradesh

- Digitizing Patient data through Voice

a. Mother & Child visiting AWC (Health Center)

b. User entering and authenticating data using mobile phone

ICDS Dashboard

c. The data entered by the mother is available in a digitized format on ICDS web portal on real time basis

Thanks

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