

Tele-community Centres and ICT Applications for Communities

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The Pakistani Paradox

- Among the countries of South Asia, Pakistan:
 - has the most extensive Internet coverage, and
 - cheapest Internet rates
- However, in terms of ‘real access’ as measured by grass root, need based, innovative applications of ICTs, it lags behind most countries in the region

Convergence

- **Convergence** - *digital unification*: all forms of communications that can be digitalized - from written text to sound and video can be delivered through similar means
- Ultimately a **single access device** could be used, though not currently practicable
- New ICTs: computers and ancillary devices, computer networks especially the Internet
- Old ICTs: telephone, radio, television

'Real Access'

- **Real Access** goes beyond computers and connections
- *The goal* - right info to the right people when they need it in forms they can understand (*two way*) - *connectivity, content* and *capacity* (enabling socio-cultural factors)

Factors for Real Access

(from Bridges.org)

- **Physical access.** Is technology available and physically accessible?
- **Appropriate technology.** What is the appropriate technology according to local conditions, and how people need and want to put technology to use?
- **Affordability.** Is technology access affordable for people to use?

Factors for Real Access (cont'd)

- **Capacity.** Do people understand how to use technology and its potential uses?
- **Relevant content.** Is there locally relevant content, especially in terms of language
- **Integration.** Does the technology further burden people's lives or does it integrate into daily routines?

Factors for Real Access (cont'd)

- **Socio-cultural factors.** Are people limited in their use of technology based on gender, race, or other socio-cultural factors?
- **Trust.** Do people have confidence in and understand the implications of the technology they use, for instance in terms of privacy, security, or cybercrime?

Factors for Real Access (cont'd)

- **Legal and regulatory framework.** How do laws and regulations affect technology use and what changes are needed to create an environment that fosters its use?
- **Local economic environment.** Is there a local economy that can and will sustain technology use?

Factors for Real Access (cont'd)

- **Macro-economic environment.** Is national economic policy conducive to widespread technology use, for example, in terms of transparency, deregulation, investment, and labour issues?
- **Political will.** Is there political will in government to do what is needed to enable the integration of technology throughout society?

Examples: Radio Browsing in Kothmale, Sri Lanka

- KCR: oldest community radio in South Asia
- Combines community radio with Internet
- 64 kbps Internet connection to a cyber community centre which also hosts KCR
- People seek info through community radio
- Info collected from Internet broadcast over the community radio

Examples: CorDECT WLL

- IIT Chennai: Professor A. Jhunhunwala
- Technology Company, N-Logue, provides infrastructure
- Cheap: replaces expensive cabling with wireless base stations
- Internet and telephone kiosk: antennas, mast, telephone set with meter, multi-media Pentium with local language support, 4-hour battery backup
- Targeted at rural entrepreneurs
- Initial costs \$ 800, eventually < \$400

Examples: Wind-up radios for communities

- Freeplay Foundation, UK:
www.freeplayfoundation.org
- Self powered technology: mostly used in Africa, so far
- Continually improving models
- latest model: battery recharge - winding, solar or adapter - upto 14 hours
- ACMAD Project: solar-powered satellite receiver with freeplay radio

Other Examples

- Simputer with local language support
- Fishermen's weather application in Pondicherry
- Gyandoot in Dhar
- Grameen phone in Bangladesh
- Radio Sagarmatha in Nepal

What do we have in Pakistan (so far)?

- SDNP's seeded *Cyber Community Centres* (2001-2002)
 - Gwadar in Balochistan (RCDC)
 - Mithi in Sindh (Baanh Beli)
 - Usterzai Payan, NWFP (Al-Asr Foundation)
- KADO's *ThreadNet* (Hunza)
 - Revival of traditional handicraft skills to develop a local cottage industry (for women)
 - Basic e-commerce (using Pan Asia's website) through mail orders and a credit card payment system

Pakistan's Paradox: What are the reasons?

- Up against **fundamental limitations**:
 - Low literacy, especially English
 - poverty
 - low tele-density
 - Unreliable electrical power
- Unrealistic to expect a speedy solution
- ICTs themselves could be used to tackle some of these problems

What are the reasons?

- More specifically for meaningful ICTs applications:
 - Not enough focus on ICTs for development
 - Development practitioners lack technical skills, even awareness
 - Much more challenging than laying infrastructure or deploying off-the-shelf hardware and software - has to be need-based, participatory, innovative
 - Language and cultural barriers
 - Not commercially attractive

What is to be done?

- Problem to be recognized and addressed:
 - Policy Reforms
 - Regulations
 - Research and Development (*active interaction between technologists and community practitioners*)
 - Capacity Building
 - Incentives

What is to be done?

- Holistic and Integrated Approach
(exemplifies the total challenge of using ICTs for social development)
 - Deeper understanding of ICT use in different cross-sections of society – gender, illiterate etc.
 - Encourage inclusive and partnership-oriented initiatives.
 - Government, civil society (social entrepreneurship), business etc.

Questions to ponder (*tele-community centres*)

- *Clarity about objectives:* What exactly are we offering?
- *Basis in real needs:* What are the needs of the community and could any of them be fulfilled through such TCCs?
- *Delivery mechanisms:* What technologies need to be deployed? Can some of the existant technologies be integrated with new ones (community radio, video applications etc.)

Questions to ponder (*tele-community centres*)

- *Capacity development*: How can the TCCs used for capacity building of the communities?
- *Sustainability*: What is the business model for TCCs to sustain beyond external support? E.g. can the existing cyber-cafes be adapted as TCCs?
- *Relevant applications*: What kind of applications can be deployed through these TCCs?
 - Business rates, telemedicine, basic e-governance, expert advice, distance learning (?) etc.