

ISOC Nigeria Chapter Seminar

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Models for Sustainable Internet Development in Nigeria

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The need to improve access to Internet in Nigeria

Population is 70-80% Rural



GDP/Capita
about 44
times lower
than high
income
countries
(\$587 vs
\$25 809) in
'95
Most
Nigerians
have never
made a
phone call
Only one
phone line
per 200
people
One
internet
user per 50
000 people

Cutting Costs

••• Computer Hardware

- Stripped-down Windows Compatible 'NetPCs' now cost less than \$500
- Network Computers (NCs) cost \$200
- Older 286+ equipment still good for many purposes

••• Free / Public Domain Software & Open Systems

- Expensive commercial packages are not necessary for most applications. e.g. Linux is being installed in 140 000 school computer labs in Mexican schools. South African SchoolNets are using entirely public domain email software and mail servers <http://www.school.za/>.

••• Transmission capacity

- Cost of satellite and terrestrial bandwidth is decreasing rapidly. E.g Tachyon is soon to provide 64Kbps VSAT links for \$200/month using equipment costing \$2000 - \$3000.
[Http://www.tachyon.net](http://www.tachyon.net) DirecPC type services (simplex/assymetric) are now available costing \$30/month for 64K incoming. [Http://www.infosat.co.za](http://www.infosat.co.za) / <http://www.hns.com>

••• Reprographic expenses

- new low cost printing presses can be far cheaper and much more reliable than a photo-copier.
E.g. RISOgraph - <http://www.riso.com/>

••• Smart cards

- Smart cards can cut administrative overheads, provide more flexible access, and provide secure transaction, funds transfer and micro-transaction possibilities.
E.g. I-Card - a simple add-on card reader for a PC (<http://www.icard.net>).
The South African Learning Network allows schools to track student performance and provide online tutorials and exams via smart cards (<http://www.learn.co.za>).

••• Subsidising Internet access costs for promoting national connectivity.

- e.g. Eight countries in Africa provide local tariff calls for Internet access from anywhere in the country (Burkina Faso, Gabon, Malawi, Niger, Senegal, Tchad, Tunisia, Zimbabwe). Some countries are looking at flat rate local call tariffs for Internet access (US, Canada, Australia already have this). This removes the cost barrier substantially, encouraging online participation.

Telecentres as a response to the problem of sustainability

••• New technology means many services can be delivered over the same infrastructure, making it more cost effective to install.

•••

Telecentres can be divided into two types:

Type-A: Demand-driven expansion of services at existing public 'telephone-shops'

Type-B: Special programmes to support new multi-purpose telecentres

Technical Design

••• Different scales

*** Large telecentre - up to 10 phone lines, call management system, cell phones for rental, fax, scanner, 5 PCs including Internet access, printer, photocopier, digital camera, overhead projector, TV, VCR, cassette tape, catering. (Common design for international projects)

*** Mini telecenter - Cabinet with 1 PC, fax, 3-in-1 scanner/printer/copier, call meter.

*** Micro telecenter - pay phone with built-in web browser/smart card reader, receipt printer.

Type-A Telecentres - Example (1)

*** Senegal

*** PTO does not provide public phones

- 7 000+ public telephone shops run by local entrepreneurs licensed by Sonatel (PTO)

- Many have added fax & word processing services

- 70+ have already added Internet access

- Sonatel gives 40% discount on tariffs and assists telecentres with new services only by providing advice (no financing).

*** Ghana

- Joint venture between a commercial ISP (AfricaOnline) and the Post Office

- Provides free email addresses

- ISP and Post Office split revenues gained from charging about 25c/message

- Over 30 000 Ghanaians signed up in 3 months to send email from any Post Office equipped with PC

Type-B - Telecentre Programmes

Two sub-types:

(1) Pilot projects conducted by International development agencies with local partners

(2) National Telecentre Roll-out Programmes as part of Government policy to address Universal Access needs

Type-B1 Telecentres - Example

UNESCO/IDRC/ITU Joint African telecentre pilots:

- Benin, Mali, Mozambique, Tanzania & Uganda

- Now being joined by FAO, UNCTAD and WHO

- Local partners always include the PTOs

- Other local partners include:

* Library system/ Reading groups

* Community Centres

* Municipalities

* Farmers Unions

* Community Radio Stations

* Chambers of Commerce

* National Ministries, esp health, agric, industry

Type-B2 Telecentres - Examples

South Africa

Universal Service Agency established at same level as the regulatory authority to roll out 2000+ telecentres using a franchise model.

Startup costs from the Universal Service Fund provided by the telecom operators. Also from partners who 'adopt' individual telecentres.

Tunisia

Agence Tunisienne d'Internet (ATI) about to announce a national tender for 100 telecentres.

Thank You.