



‘Open Access’  
An approach for building and financing  
pro-poor ICT infrastructure

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# Presentation Outline

- Introduction
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- Challenges to rural connectivity
- What is an 'Open Access' approach
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# Introduction

One focus for pro-poor community driven ICT networks is the potential application, feasibility and comparative benefits of adopting “open access” approaches for:

- addressing gaps in network infrastructure to poor and rural/underserved areas
- addressing challenges to open access at the level of regulatory regimes and financing mechanisms



## Need for pro-poor ICT networks

There is need to enhance bandwidth and ICT availability in rural and peri-urban areas in order to:

- Enhance delivery of services (e.g. immunization campaigns, voter registration)
- Empower local communities (information → knowledge → action)
- Strengthen local development opportunities (e.g. access to relevant content/government services, access to markets and market information)



# Challenges to rural connectivity

Well known and include:

## (1) *Supply*

- Limited infrastructure
- High deployment and maintenance costs
- Inadequate financing or adoption of 'high-margin low-volume' financing models

## (2) *Demand*

- Lack of awareness and 'disposable' income for ICTs within rural areas

**Potential solution = Open Access Approach**



# What is an ‘Open Access’ approach?

- InfoDev publications on this subject are a widely used reference to define Open Access
- The viability of an Open Access approach is in part based on the growing move toward Internet Protocol (IP)-based communication networks
- Such networks have a layered structure (physical – logical – applications e.g. browser – content e.g. voice, data, images):
  - Allows any telecom service provider to use different elements or the entire network to provide services
  - Different layers will attract service providers with different business models e.g. in Uganda it may be logical to have one national backbone but several content providers



# IP-based Network's Layers

Content Layer

*(Web pages, Voice call)*

Applications Layer

*(Internet Explorer, Mozilla, Outlook, Me2U)*

Logical Layer

*(Interface between applications and infrastructure)*

Physical Layer

*(Backbone, fibre, copper, wireless)*



# What is an ‘Open Access’ approach? ../2

## Key element of an Open Access Model

No provider in any of the layers can use their dominant market share to:

- block access to another layer
- block access to the rest of the network

*Should an SME be able to set up a Voice over IP (VOIP)-based phone centre over a national telecom operator telephone line?*

*Should a proprietary web browser be designed to block access to free software campaigns/content?*



# OA approach - Infrastructure

- Backbone networks entail long-term investments with significant capital costs and risks
- However, possess *public good* characteristics since all operators, including mobile, can potentially benefit from the existence of backbones
- An OA approach to national backbones and long-haul links (e.g. EASSy) would enable operators at higher levels obtain and in turn provide high performance, low-cost applications/content to end users.
- An operator at one level is free (within the framework of appropriate regulation) to do whatever it sees as most viable within its own layer (e.g. setup a community wireless network)
  - As long as correct specifications are provided to layers at the interface



# OA – Regulation and Financing

- OA approaches and flexible technology (in particular, wireless) spark the potential for locally-provided services and network growth at “the edges” or “the last mile”
- Regulation is needed to provide an enabling environment where there is:
  - Transparent information about market prices and service (existing and newly introduced)
  - The different roles of providers is clear, and infrastructure providers do not enter service markets to compete with their customers (but to add value)
  - Infrastructure provider should not be allowed to reserve for itself all of the functions that create value in the market (provide the road but not the cars)
  - Interconnection rate issues are balanced in such a way to match:
    - Infrastructure provider’s interest to keep re-investing in the network
    - Opportunities that can be created for greater levels of new business from small or large entities at higher layers
- Consider collective, community or cooperative ownership models to finance local/community networks that plug into lower layers e.g. the national backbone



# Concluding Remarks

- Current regulatory environment has few situations of infrastructure sharing or regulatory requirement for infrastructure sharing or open access
- Technological innovation (especially with wireless) coupled with flexible approaches to financing, service delivery and regulation supports the financing and setup of pro-poor ICT infrastructure



# Concluding Remarks ../2

InfoDev studies show that Open Access models can help assure:

- Broader access to affordable and appropriate information, and communication infrastructure and services
- Growth in demand that will fuel, and finance, expansion of the network on which those services depend