

# Universal Service in a Converging World

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# Overview

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- **Universal Service Obligations**
- **New Technologies**
- **Technology Neutrality**
- **Universal Service Fund**



# Universal Service Obligations (USOs)

- There is no fixed or standard definition for USOs, but in general, currently established universal service/access policies seek to meet the following objectives:
  - ***Availability***
  - ***Affordability***
  - ***Accessibility***



# Universal Service Obligations (USOs)

- Most USOs are established under the premise that a *minimum set of telecommunications services* should be made *available to all end users* in the country, *regardless of their geographical location*, and at *an affordable price*.
- However, universal service/access objectives vary from one country to another...



# USOs – European Union

EU member states must ensure:

- Ability to make and receive local, national and long distance calls, fax communications, and to have functional access;
- Access to directory and enquiry services;
- Availability of public pay phones;
- Disabled have access to the same services at an affordable price.
- Connection that provides “functional” Internet access.
- Response to reasonable requests to install a telephone line, offering the same prices irrespective of location.



# USOs - Uganda

- Ensure universal availability to public communication networks through inter alia pay phones, community tele-centres, tele-boutiques, kiosks, cafes or community communications internet access terminals
- Provide the following services:
  - (i) connection to a fixed communication network,
  - (ii) reasonable geographic access to public call boxes,
  - (iii) access emergency and free services, operator and directory assistance,
  - (iv) ability to meet needs of people with disability,
  - (v) affordable basic services to all customers
  - (vi) providing customers with disabilities with the same or equivalent services as all other customers.



# USOs - India

## Stream I: Provision of Public Telecommunications and Information Services

- (a) Operate and maintain village public phones (VPT);**
- (b) after target of one VPT per village achieved, provide additional public phone in villages of 2000+ without public call office;**
- (c) replace multi access radio relay technology public phones;**
- (d) upgrade public telephones to public tele-information centers;**
- (e) install high speed public telecommunications information centers.**

## Stream II: Provide household telephones in rural and remote areas as determined by central government



# Universal Service Obligations (USOs)

- Countries have begun to take advantage of technological development (i.e., the Internet) to provide both voice and data communications services, but...
- Often USO objectives still rely on improvement and expansion of wireline networks to provide service and access to populations in unserved and underserved areas.



# Universal Service Obligations (USOs)

- However, efforts to provide universal service/access through wireline networks have had incremental results.
- Need to consider the benefits that new technologies – *such as wireless technologies* – can bring to telecommunications networks and to fulfillment of universal service/access goals.



# Impact of New Technologies

- Provide unserved and underserved areas with faster service and more affordable access to communication.
- As of 2002, cellular phone users exceeded number of main telephone lines in operation in 125 countries.
- Mobile technologies often used to provide rural and difficult to reach communities with fixed-wireless and mobile public payphones.



# New Technologies

- In developing countries mobile networks have become a substitute for fixed networks because:
  - they can provide wider coverage;
  - they can usually be easily and quickly deployed;
  - their management and maintenance is simpler;  
and
  - pricing schemes applied by mobile operators have made telephony service affordable for the urban poor.



# New Technologies

- Next generation (IMT-2000 or 3G) mobile wireless technologies are also being deployed around the world as they can offer both voice and data services at affordable costs and thus can provide even greater access to communications services.
- 3G technologies, such as CDMA 2000 and WCDMA, can support both voice and broadband wireless access, transmit large amounts of traffic in small amount of spectrum and provide wider coverage.



# New Technologies

- VoIP, VSATs, broadband wireless access (BWA), and broadband over power-line (or power-line communications), are not widely used at present, but could also provide connectivity inexpensively and effectively to rural areas.



# Regulatory Impact of New Technologies

- Need to introduce forward-looking telecommunications policies that foster the use of new and innovative technologies as they can be instrumental in helping countries to achieve universal service/access goals.



# Technology Neutrality

- Technology neutrality is a critical factor in establishing progressive policies because it allows entry of all technologies
- Technological choice is not be limited
- Avoids traditional paradigms that only rely on wireline operators to achieve universality



# Technology Neutrality

- Technology-neutral policies:
  - can encourage application of innovative technologies
  - foster more competitive and dynamic market that can support USO goals.
  - conducive to universal service/access policy that can better answer needs and demands of rural populations.
- *In addition, a licensing regime that allows flexibility to take advantage of technological development and convergence is required.*



# Universal Service Fund (USF)

- USF should not only support a country's present universal service objectives, but also be able to adapt to the demands and trends of a converging telecommunications sector by fostering the use of new and innovative technologies to achieve future USO goals.



# USF – Revise USF Objectives

- To encourage the use of new technologies in achieving universal service/access, countries first have to revise existing USF objectives.
  - Given increasing importance of mobile technologies in providing affordable access to previously unserved or underserved areas, and the increasing usage of other new technologies in similar efforts, USF rules should consider integrating and supporting the application and deployment of new technologies to meet USO requirements.




# USF – Revise USF Objectives

- ***Colombia, South Africa and Uganda:***
  - mobile payphones and public access businesses are being used to fulfill regulatory obligations and/or to meet USF competition requirements.



# USF – Purpose of the USF and Role of Universal Service Provider


- To ensure the smooth incorporation of new technologies into USF programs, and guarantee the equal participation of all telecommunications sector participants, countries also need to make certain that the purpose of the USF and the role of the universal service provider is well-defined.



# USF – Purpose of the USF and Role of Universal Service Provider

## *Peru*


- FITEC established to provide populations in rural areas and localities considered of “preferred” social interest with greater access to telecommunications services
- FITEC administration and management regulations also stipulated that FITEC would *not* finance past or future network expansion obligations imposed on telecommunications operators by the government



# USF – Purpose of the USF and Role of Universal Service Provider

## *Uganda*

- RCDF funds are only used to improve and service rural areas
- “serve or lose” clauses have been included in main operator licences with regards to rural areas – to motivate main operators to effectively comply with USO obligations, as well as to provide new market entrants with an opportunity to provide those services if the main operator fails to do so



# USF – Purpose of the USF and Role of Universal Service Provider

## *India*

- Aside from being eligible for USF funds, the incumbent operator receives Access Deficit Charge (ADC) revenues (that have been reduced from 30 to 10 percent, but that come from the country's USF) to cover its deficit for providing fixed lines in rural and urban areas.



# USF – Access to Funds

- Mechanisms need to be put in place to make USF funds accessible to a wider range of telecommunications service providers.
- Limiting access of funds to a specific category of licensee or to particular licensed operators, can create barriers that continue to support existing conditions and discourage the implementation of new technologies to provide service in unserved or underserved areas.



# USF – Access to Funds

## *Peru*

- Telecommunications services providers with concession contracts for final public services (fixed line, including pay phones, and mobile) and value added services (data services including broadband Internet access) can access FITELE funds
- If the entity/company requesting the funds does not have a concession contract for the area for which it is requesting the funds, the entity/company must request the appropriate expansion of the concession contract from the Ministry of Transportation and Communications.



# USF – Access to Funds

- Letting a variety of entities make proposals and have access to USF funds allows countries to benefit from a greater number of possible resources to help it achieve its universal service goals
- These resources can also sometimes provide innovative solutions for small-scale projects that would normally not be considered profitable



# USF – Development and Presentation of Project Proposals

## *Chile*

- Project proposals can be presented by telecom service providers, regional/provincial/municipal authorities, universities, non-governmental organizations (NGOs), neighborhood communities and others
- SUBTEL, the entity responsible for administering and managing the country's universal service fund, uses these project proposals to design and develop the fund's annual project agenda



# USF – Development and Presentation of Project Proposals

- Having multiple sources for project proposals can provide:
  - a more realistic vision of the needs and conditions of the market, such as what type of service is required by localities and which technology is best suited, and
  - can result in creative and resourceful project solutions.



# Conclusions

- Establishing technology-neutral telecom policies that include an adaptable licensing regime can facilitate the entry and use of new and innovative technologies and provide a wider range of participants to achieve USO goals.
- Revising USO objectives and implementing suitable mechanisms for the disbursement of USF resources can also help take full advantage of multiple resources and technological development to better serve and benefit underserved and unserved populations.



# Next Steps for India

- Reconsider universal service fund (USF) objectives to take into account the advantages and benefits wireless technologies can bring to achieving universal service/access in the country
- Define the purpose of the USF and the role of the universal service provider to guarantee the equal participation of all telecommunications service providers, as well as encourage the incorporation of new technologies in USF programs



# Next Steps for India

- Put mechanisms in place to make USF funds accessible to a wider range of telecommunications service providers
- Development and presentation of project proposals for USF funds should be open to all entities with an interest in contributing to the fulfillment of universal service/access

# Thank You

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