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**EXAMINING POLICIES SUPPORTING UNIVERSAL SERVICE  
( BROADBAND)**

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# Agenda

- Introduction
- Universal Service
- Auction
- Spectrum trading and Re-farming
- The opportunity cost of unused spectrum
- Conclusion

# Introduction

- Proliferation of Broadband services will greatly impact the effort of achieving the Millennium Development Goals.
- At the World Summit on the Information Society (WSIS) world leaders recognized the significant role of Information and Communication Technologies as a catalyst to help achieve the UN- MDGs
- In today's society broadband access is an essential part of economic development, educational access, civic participation and overall quality of life.

- **Universal Service** In the Telecommunication context the universal service, is the concept of making affordable access to public communications services.

as a reasonable means of access to a public communications network through a Community Tele- Centre where pay telephone, internet services and other means of communications are provided.

- The overriding objectives of the universality policies are
  - to extend and maintain the availability of modern, high-capacity communications networks
  - and maintain availability of affordable communications services to the public **including those living in rural and remote areas as well as those in a lower income groups.**



# Sengerema model Multi-purpose Telecentre



# Universal service.

- Neither the private market initiative **alone** nor government **alone** can bring broadband services throughout the un-served villages scattered throughout the 986,000 square mile of Tanzania.
- Four catalysts that will accelerate the process of making broadband universal by connecting our villages, towns and cities.
  - Private investment and Public assistance (PPP)
  - Wireless access technologies
  - Appropriate policies on spectrum resource allocations

## Comparison with other countries

	<b>GDP</b>	<b>Internet</b>	<b>Fixed</b>	<b>Mobile</b>
	<b>US\$ per head</b>	<b>Customers per 100 population</b>		
South Africa	5833	8.3%	9.8%	88.9%
Morocco	2374	21.4%	7.8%	64.9%
Egypt	1697	11.4%	14.9%	39.8%
Nigeria	1120	6.8%	1.1%	27.3%
Zambia	953	4.2%	0.8%	22.1%
Kenya	786	8.0%	0.7%	30.5%
<b>Tanzania</b>	<b>400</b>	<b>1.0%</b>	<b>0.4%</b>	<b>20.6%</b>
Mozambique	363	0.9%	0.3%	15.4%
Uganda	363	6.5%	0.5%	13.6%

# First come First serve

- Does not provide much competition
- Most of the time serious players are not aware that the band has been opened
- Spectrum tend to go to those who have no technical and financial capability
- Network rollout is delayed and sometime non starter

- **Approach to use spectrum policies that support universal.**

- One method to grant spectrum license through bidding. The highest bidder receive the spectrum license
- The primary advantage of an auction is its tendency to assign the spectrum to those best able to use it.
- The process is transparent and speed
- The auction revenue can be contributed to Universal Fund

Disadvantage of spectrum auctioning approach

- The high costs paid by successful bidders are usually passed on to customers.

- The results can be excessive rates for consumers of wireless services, especially for low-income consumers.

- In a situation where competition is weak, bidders have an incentive to reduce their demands in order to keep prices low.

- However auction with design

- low spectrum fee charged on rural and remote
- or government commitment to provide some of necessities, access road, electricity supply etc

## Spectrum Trading

- Covers the range of possibilities from change of ownership of an assignment with no change of use to more advanced variants such as use change.

Trade spectrum efficiently between licensees in compliance with international requirements

- Spectrum trading expedite the delivery of spectrum for new service and applications
- Benefit of Spectrum Trading
- Optimal use of spectrum; Market are efficient mechanism for distributing a scarce resource such as spectrum, to maximise economic welfare.
- Incentive for spectrum efficiency; Spectrum pricing gives licensees incentive to use spectrum more efficiently as they can reduce their fees by relinquishing spectrum.
- Faster access for new entrants and less uncertainty; new applicant can acquire spectrum through the market faster.

## Spectrum Re-farming

- The retrieval of spectrum from its existing users for the purpose of re-assignment, either for new uses or for the introduction of new spectrally efficient technologies.
- Management tool that can satisfy new market demands and increase spectrum efficiency.
- Re-farming instruments; compensation funds, pricing incentives, secondary trading, Licence expiry, Licence revoking

# Opportunity cost of unused spectrum

- Spectrum resource ranks sixth after famous five resources; Capital, Land, Labour, Technology and entrepreneurship.
- Because it can be transformed to create wealth
- Spectrum can be treated as a commodity and sold
- It is used to transport information from point A to B without the benefit of physical connection.
- Support industries that manufacture spectrum related goods.
- It is complex to quantify amount of wealth lost due to unused spectrum.

# Conclusion

- Spectrum allocation mode can influence or support making universal availability of broadband.
- Spectrum; Auctioning, trading and re-farming can expedite access for new entrants and less uncertainty; as new applicant can acquire spectrum through the market faster.
- Ensures that spectrum resource is on the hands of those who best can use it.
- Market are efficient mechanism for distributing a scarce resource such as spectrum, to maximise economic welfare.
- There is no size fit for all, careful combination of approaches can yield a desirable result



THANK YOU FOR YOUR TIME