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Spectrum Valuation: Multiple Facets and Approaches

Joaquin RESTREPO

**Capacity Building Coordinator; Study Groups Department (SGD);
Radiocommunications Bureau (BR); International Telecommunications Union, ITU**



Spectrum Valuation

- How much does it cost the Spectrum?
 - Government: How much does want to cash?
 - User: how much is ready to pay

What are the National Policies related to Spectrum as a National Asset?

See:

- ITU-R National Spectrum Management Handbook (Chapter 6)
- ITU WTDC Resolution 9

Hindsight

- Telecom as State Monopoly
Spectrum ruled/managed/used by the PTT
 - Implicit costs related to internal management
- Private users
 - Administrative fees
- State users
 - What service (e.g. aeronautical, maritime)
 - what user: Defense, Government
 - Who does pay the administrative fees?

Telecom License Bidding

- Broadcasting:
 - Spectrum needed to provide a a public commercial service (what is traded is the service, NOT the Spectrum)
 - TV Broadcast vs Cable TV : same service, same bidding, different cost modeling (with and without Spectrum)
- Satellite Services (National Orbit-Spectrum Ressource, OSR)

Telephony: Local, LD (National, Innal.)

Not all commercial Telecom need Spectrum

Commercial Approach: Business cases

From PPT to Open market

Non commercial:

- Private Users: Administrative fees
- Official Users: Administrative fees (who will pay?)
- Communitarian users: Social Policies (who will pay?)
- Unlicensed: who will cover administrative cost?
 - (what if unlicensed but commercial?)

Commercial

- Satellite Services (National Orbit-Spectrum Ressource, OSR)
- TV Audio Broadcast, Cable TV : same service, same bidding, different cost modeling (with and without Spectrum)
- Mobile Operators:
- Again: Spectrum needed to provide a a public commercial service (what is traded is the service, NOT the Spectrum)

Spectrum Market

Mechanisms:

- Bidding
- Auctions
- Beauty Contest
- Direct License

- **Resource:**

- Band
- Bandwidth
- Coverage
- Time Term
- Renewal?
- Secondary Market?

Spectrum Value

Economic (Milky Cow?)

- Cash cash cash
- Who will cash it?
 - USD/MHz/Pop USD/PIB
 - Opportunity Cost
 - **Winner Curse?**
- **Social Benefit:**
- Mobile Broadband as key enabler to bridging the Digital Divide
 - Coverage (parameters?)
 - Served Population, Traffic
 - who does pay administrative fees?
- **Mixed Model:** Recipe?

Spectrum Value

Users:

- Private
- Communitarian
- Official
- Commercial

• Band :

- Low Bands (large Coverage)
- Higher Band (Urban areas)

• Service :

- Fixed
- Mobile
- Broadcasting
- Satellite (all above)
- Not from Telecom : Aeronautical, Maritime, Amateur, Remote Sensors, etc.



Spectrum Value

Administrative Fees :

- Private
- Official

- **Bidding :**

- Commercial

- **Social benefit :**

- Communitarian

Mixing 3 above

**Spectrum Valuation and fees shall reflect
the National Policies on Spectrum Management**

THANKS 😊
GRACIAS 😊

Further info:
joaquin.restrepo@itu.int