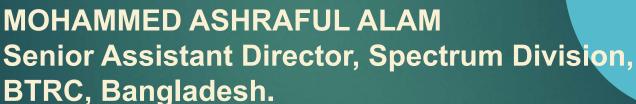
COUNTRY EXPERIENCE ON SATELLITE SERVICE REGULATORY FRAMEWORK





ITU SATELLITE SYMPOSIUM 2017
BANGKOK, THAILAND.
31 AUGUST 2017 – 01 SEPTEMBER, 2017



BTRC'S ROLES ON RADIO COMMUNICATION FIELD

- > Spectrum Management
 - Establishment of Frequency Assignment Plan in Bangladesh
- > Spectrum Monitoring
- > Licensing
- Guideline and Directives
- > Activities for WRC and Standardization
- Satellite Network Coordination
 - Maintenance of satellite network filings
 - Coordination between Bangladesh and other Administrations

For more information, please visit http://www.btrc.gov.bd/



REGULATORY FRAMEWORK-OVERALL

Policies

National Telecom Policy (1998)

Broadband Policy (2008) National ICT Policy (2009)

ILDTS Policy (2007, 2010 Rev)

Policy Makers

MoPT & IT

MoICT

MoF

Planning Commission

Licensing Framework

SMC IGW

BWA NIX

VSP ISP

ICX

NTTN ITC

VSAT | IPTSP

Laws

Telegraph Act (1885)

BTA (2001) Revised 2010 Wireless Telegraphy Act(1933)

ICT Act (2006)

Regulator



Regulations/ Guidelines

Interconnection Regulation 2004

National Numbering Plan 2005

Infrastructure Sharing Guideline Licensing Regulation 2004

VAS Guideline

NFAP



Branderideoit telegolimionio/hiotriceooemicari ob (BTRC)

IIG

REGULATORY FRAMEWORK-OVERALL

Telecom Regulator

BTRC

Regulations/Guidelines

Licensing Framework

Policy Maker

Policies

Regulator

- National Telecom Policy, 1998
- National ICT Policy, 2009
- National Broadband Policy, 2008
- ILDTS Policy, 2007 & 2010 Rev.
- MoPT & IT
- MolCT
- MoF
- Planning Commission



REGULATORY FRAMEWORK-SPECTRUM ASSIGNMENT

Spectrum Assignment Procedures

Applied to BTRC



Preliminary Examined by BTRC



Approval From Spectrum Management Committee (SMC)



Assigned for Test Transmission



Finally Assigned the Spectrum

- The interested entities can submit the application following the procedures to the Commission.
- According to Spectrum Assignment Procedures BTRC examined the Required Documents and getting Required Fees.
- BTRC place the application to the Spectrum Management Committee (SMC) for their opinion.
- The SMC recommends the proposal to the Commission.
- According to the decision of the commission the spectrum is assigned to the applicant.
- Assigned frequency for 7 (seven) days test transmission.
- The licensee submit the test transmission report.
- Inspection team of BTRC will inspect the broadcast method of the organization.
- The Commission, upon inspection report, will award the License to Operate Radio Communications Equipment.



REGULATORY FRAMEWORK-BROADCASTING SERVICES

Method of Broadcasting Framework **Terrestrial** Ministry of Issue the License Satellite Television Television ➤ Regulate Contents Information (MoI) Frequency Allocation According to ITU Guideline BTRC FM Radio Community Radio and NFAP regulate the assigned frequency Regulation · According to the law of Bangladesh terrestrial television broadcasting BTV is using Terrestrial 174-230 MHz spectrum in VHF band. Television In NFAP, 522-698 MHz spectrum is reserved for terrestrial television broadcasting. As such, this spectrum can be allocated for digital terrestrial broadcasting in future. Satellite Television According to NFAP, frequency is assigned from BTRC to the licensee, 6/9/12 MHz uplink frequency from 5.85-6.425 GHz band. FM/ Community According to NFAP, frequency is assigned from BTRC to the licensee from 87.5 to Radio 108 MHz



REGULATORY FRAMEWORK-SATELLITE SERVICES





CELL PHONE NETWORK IN BANGLADESH



2000 30 District

2002 50 District

2004 61 District

Present All District











More than 99% of the country's population and about 98% of the geographical area under the telecom network.



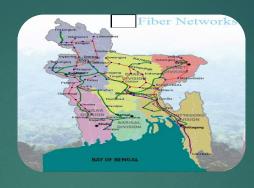
INFRASTRUCTURE & BASE OF TELECOM SECTOR



47616 2g- BTS & 29352 3g-



About 7000 Village Information Service



Whole Country **52237** km optical fiber Network



104 TV & Radio Broadcasting Center



02 Submarine Cable & 06 Terrestrial Cable



About 1.5 million people in Service



EXPANSION RATE OF TELECOMMUNICATION SERVICES

Number of Subscribers

Туре	January 2002	December 2008	December 2016	June 2017
Mobile	253 thousand	46 million	126.3 million	136 million
Internet	52 thousand	4.95 million	66.6 million	73 million
Teledensity	<1%	34.50%	81.48%	85%



LIST OF LICENSEE AND SERVICE PROVIDER (1/3)

Service Provider	Number of Licensee	Number of Operational entities
Mobile Operator	6	6
PSTN/ Fixed Telephone	12	2
International Gateway (IGW)	27	21
Inter Connection Exchange(ICX)	26	26
International Internet Gateway (IIG)	37	31
National Telecommunication Transmission Network(NTTN)	5	5
Submarine Cable	1	1
National internet Exchange (NIX)	2	2



(BTRC)

LIST OF LICENSEE AND SERVICE PROVIDER (2/3)

Service Provider	Number of Licensee	Number of Operational entities
International Terrestrial Cable (ITC)	6	6
TV Broadcasting	43	30
Radio Broadcasting	61	29
Internet Service Provider (ISP)	531	531
Broadband wireless Access (BWA)	3	3
Internet Protocol telephony Service Provider (IPTSP)	42	27



LIST OF LICENSEE AND SERVICE PROVIDER (3/3)

Service Provider	Number of Licensee	Number of Operational entities
VoIP Service Provider (VSP)	881	881
Call Center	202	85
VSAT	28	28
VTS	19	14
Public Mobile Radio (PMR)	677	500
Dealer position and Radio Equipment vendor license enlisted	990	990
Aeronautical and Maritime	287	200
Total	3848	3367



SPECTRUM MONITORING SYSTEM OF BANGLADESH

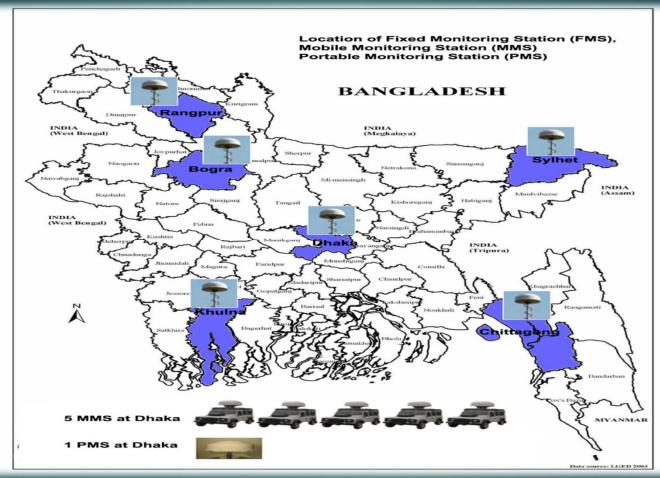








LOCATIONS OF FIXED MONITORING STATIONS ON MAP





BASELINE CHARACTERISTICS OF PROPOSED SATELLITE

Specification s

- Type: Communication & Broadcasting Satellite (GEO)
- Transponders: Total 40 (14 C-band,
 26 Ku-band)
- Primary Service Area: Bangladesh, India and SAARC Countries
- Secondary Service Area: Indonesia,
 Philippines and part of STANs countries

(BTRC)

BASELINE CHARACTERISTICS OF PROPOSED SATELLITE

Ground Stations

- Primary Station: Full Facilities with TT&C, NOCC, SOCC and Power Backup at Gazipur, near Dhaka.
- Secondary Station: Full Backup of Primary Station with the Facilities of TT&C, NOCC, SOCC and Power Backup at Betbunia, Rangamati, near Chittagong.

BASELINE CHARACTERISTICS OF PROPOSED SATELLITE

Services

- Direct to Home television (DTH)
- Television program distribution
- VSAT (corporate networks)
- Trunking (e.g. Internet, telecoms)
- Restoration /disaster recovery and social services.



ADVANTAGES OF BANGABANDHU SATELLITE

- Uninterrupted telecommunication & broadcast services
- Saving USD 14 million/year due to the payment of satellites outside
- Prospect to earn huge foreign currency by leasing transponder
- Besides the core telecommunication services, it would serve in telemedicine, e-learning, e-education, DTH etc. services
- Uninterrupted Communication while terrestrial system interrupted during natural calamities
- Increase in Govt. revenue by through the license fee and spectrum charge of different satellite services
- Direct and indirect employment through satellite technology and its services.



FUTURE PLANS OF BTRC

- Issuance of 4G License
- Spectrum Auction (2G, 3G, LTE and 4G)
- Technology Neutrality
- Digital Broadcasting Switchover
- Up gradation and Expansion of Spectrum monitoring
 - System
- NOC Automation & NEIR
- Mobile Virtual Network Operator





...THANK YOU