Development of Frequency band for Public Protection & Disaster Relief (PPDR)/ Disaster Management in Bangladesh

by

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About BTRC

Bangladesh Telecommunication Regulatory Commission (BTRC) is an independent Commission established under the Bangladesh Telecommunication Act, 2001 (Act no. 18 of 2001) published by Parliament in the Bangladesh Gazette, Extraordinary issue of 16 April, 2001. The BTRC started functioning from the 31st January 2002.

About BTRC (Contd….)

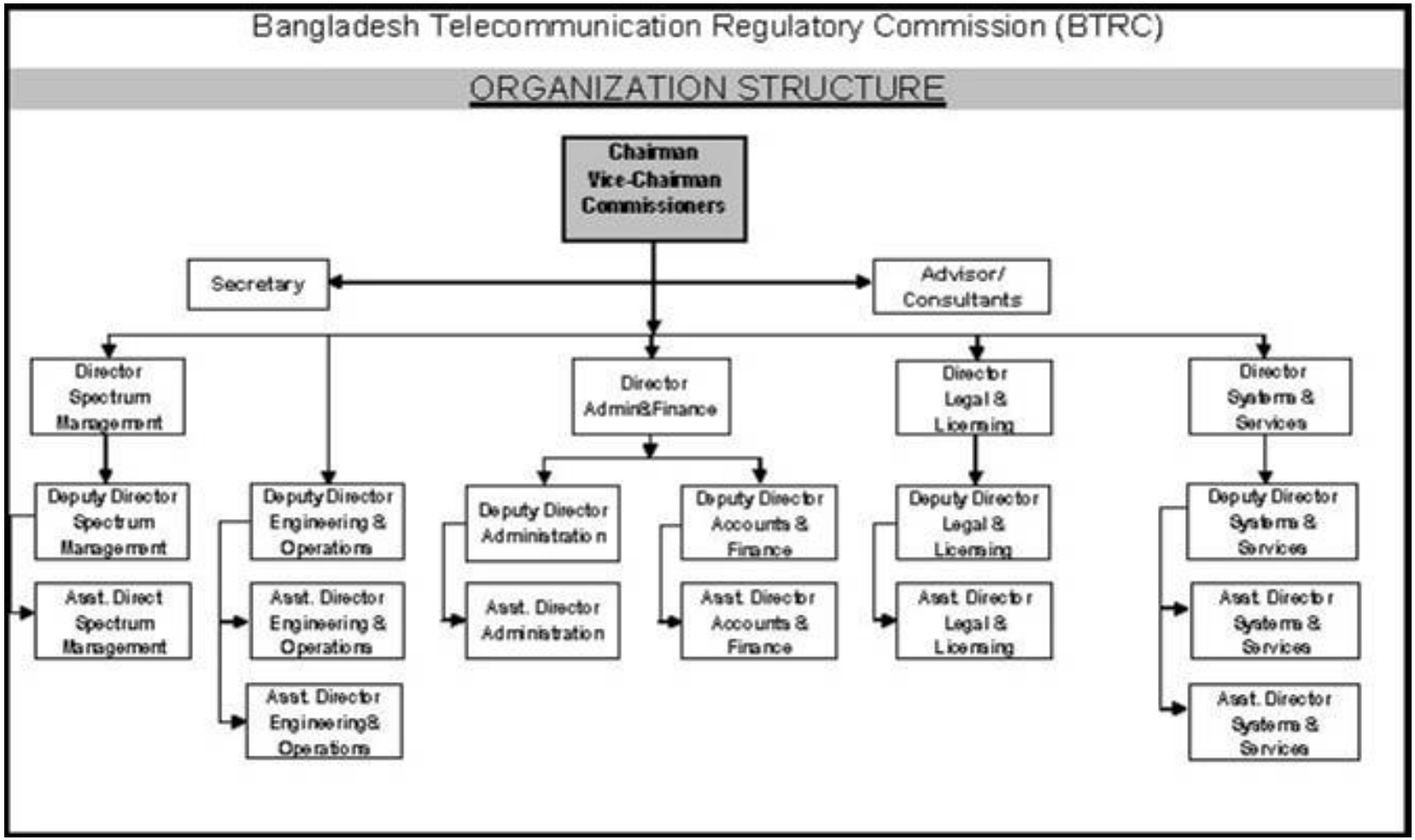
Vision:

- To Facilitate affordable telecommunication services of acceptable quality for all regardless of their location.

Mission:

- Increase the teledensity to at least 10 telephones per 100 inhabitants by 2010.
- Establish a phone in every village by 2006.
- Promote ICT applications to support socio economic development.
- Create an enabling environment and customer choice for ICT services.
- Encourage joint Public-Private cooperation in ICT development.
- Encourage ICT applications which stimulate poverty reduction.

About BTRC (Contd…)



ITU's Decision

- By Resolution 646 of WRC 2003, the ITU identified the frequency bands for PPDR
- Two frequency bands **746-806** MHz & **4940-4990** MHz are under development

Provisions in NFAP (National Frequency Allocation Plan)

- 771 – 776 MHz &
- 801 – 806 MHz

  in 746 – 806 MHz band &

- 4940 - 4990 MHz

APT Activities

- 764 – 776 MHz & 794 – 806 MHz
  from 746 – 806 MHz band
  &
- 4940 - 4990MHz bands
  are under active development of APT

Development of bands by BTRC

Base & mobile use:-

- 773 - 776 MHz band may be used for base, mobile or fixed (repeater) transmissions.
- 803 – 806 MHz band may be used only for mobile or fixed (control) transmissions.

Narrow band segments

The sub-bands

- 764 – 767 MHz
- **773 – 776** MHz
- 794 – 797 MHz &
- **803 – 806** MHz

are designated for use with narrowband emissions having a channel bandwidth of **6.25 KHz**

Narrowband channel plan

Frequency range	Channel #
764 – 767 MHz	0001 - 0480
773 – 776 MHz	**0481 - 0960**
794 – 797 MHz	0961 - 1440
803 – 806 MHz	**1441 - 1920**

Narrowband interoperability channels

- The following narrowband channels are designated for interoperability use:-
- 0641, 0642, 0657, 0658, 0681, 0682, 0697, 0698, 0721, 0722, 0737, 0738, 0761, 0762, 0777, 0778, 0801, 0802, 0817, 0818, 0841, 0842, 0857, 0858, 0881, 0882, 0897, 0898, 0921, 0922, 0937, 0938, 1601, 1602, 1617, 1618, 1641, 1642, 1657, 1658, 1681, 1682, 1697, 1698, 1721, 1722, 1737, 1738, 1761, 1762, 1777, 1778, 1801, 1802, 1817, 1818, 1841, 1842, 1857, 1858, 1881, 1882, 1897, 1898.
- Total 64 channels.

Narrowband data Interoperability channels

The channel pairs

- 0921/1881 &
- 0922/1882

are reserved for the express purpose of data transmission only.

Narrowband calling interoperability channels

The channel pairs

- 0681/1641 &
- 0682/1642

are dedicated for the express purpose of Interoperability calling only

Narrowband trunking Interoperability channels

The channel pairs,

- 0657/1617, 0658/1618, 0737/1697, 0738/1698, 0817/1777, 0818/1778, 0897/1857 & 0898/1858 (Total 8 pairs)

may be combined with the appropriate adjacent secondary trunking channel pairs and used in trunked mode on a secondary basis to conventional Interoperability operations.

Narrowband reserve channels

- The following narrowband channels are undesignated and reserved:-
- 0643, 0644, 0683, 0684, 0699, 0700, 0723, 0724, 0763, 0764, 0779, 0780, 0803, 0804, 0843, 0844, 0859, 0860, 0883, 0884, 0923, 0924, 0939, 0940, 1603, 1604, 1643, 1644, 1659, 1660, 1683, 1684, 1723, 1724, 1739, 1740, 1763, 1764, 1803, 1804, 1819, 1820, 1843, 1844, 1883, 1884, 1899 & 1900.
- Total 48 channels

Narrowband low power channels subject to regional planning

- The following narrowband channels are designated for low power use for on-scene incident response purposes using mobiles and portables:-
- Channels 0949 – 0958

  paired with
- Channels 1909 - 1918
- Total 10 pairs

  Tx power must not exceed 2 watts (erp)

Narrowband low power itinerant channels

- The channels **0959 & 0960** paired with channels **1919 &1920** are designated for low power use for on-scene incident response purposes using mobiles and portables. These channels are for itinerant operations.
- Tx power must not exceed 2 watts.

Administration's power for specific use

- The following narrowband channels may be designated by the administration for specific usage:-
- 0645 – 0656, 0685 – 0696, 0725 – 0736, 0765 – 0776, 0805 – 0816, 0845 – 0856, 0885 – 0896, 0925 – 0936, 1605 – 1616, 1645 – 1656, 1685 – 1696, 1725 – 1736, 1765 – 1776, 1805 – 1816, 1845 – 1856, 1885 - 1896

Secondary trunking channels

- The channel pairs
- 0659/1619, 0660/1620, 0739/1699, 0740/1700, 0819/1779, 0820/1780, 0899/1859 & 0900/1860

  are reserved for secondary trunking operations

Wideband segments

- Two wideband segments
- Bandwidth 2 MHz (Each)
- Channel bandwidth 50KHz
- Total number of channel available 80

Wideband segment & channels

Frequency range	Channel Numbers
771 – 773 MHz	080 - 120
801 – 803 MHz	200 - 240

Wideband Interoperability channels

- The channels
- 082, 083, 084, 091, 092, 093, 202, 203, 204, 211, 212 & 213

  are designated for interoperability use

Wideband reserved channels

The Wideband channels

- 094 – 120

  &

- 214 – 240

are reserved.

******Thanks everybody******