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

by

Md. Abdur Rashid

Director (Current Charge)
Spectrum Management, BTRC

4/6/2006
About BTRC

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...)

Organization Structure of the Bangladesh Telecommunication Regulatory Commission (BTRC)

[Diagram showing the organizational structure of BTRC, including roles such as Chairman, Vice-Chairman, Commissioners, Secretary, Advisor/Consultants, Directors, and Assistant Directors with specific responsibilities like Spectrum Management, Engineering, Administration, Accounts, Finance, Legal, Licensing, Systems, and Services.]
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

<table>
<thead>
<tr>
<th>Frequency range</th>
<th>Channel #</th>
</tr>
</thead>
<tbody>
<tr>
<td>764 – 767 MHz</td>
<td>0001 - 0480</td>
</tr>
<tr>
<td>773 – 776 MHz</td>
<td>0481 - 0960</td>
</tr>
<tr>
<td>794 – 797 MHz</td>
<td>0961 - 1440</td>
</tr>
<tr>
<td>803 – 806 MHz</td>
<td>1441 - 1920</td>
</tr>
</tbody>
</table>
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:
- 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:
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

<table>
<thead>
<tr>
<th>Frequency range</th>
<th>Channel Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>771 – 773 MHz</td>
<td>080 - 120</td>
</tr>
<tr>
<td>801 – 803 MHz</td>
<td>200 - 240</td>
</tr>
</tbody>
</table>
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