



Spectrum Management

National Communications Commission

September 14, 2009, NTIA



National Communications Commission

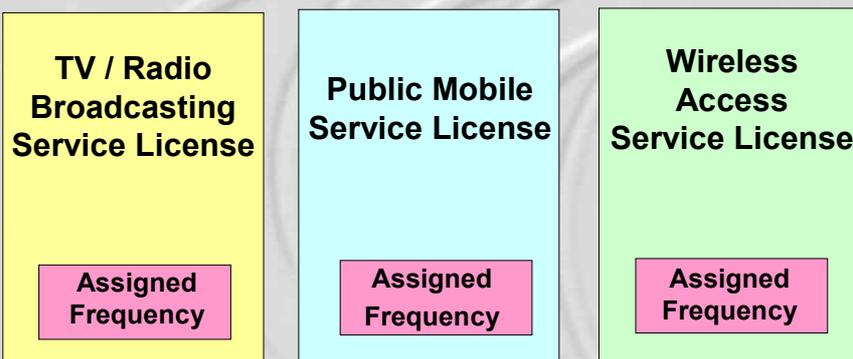
Outline

- ◆ **Role of NCC**
- ◆ **Licensing and Frequency Assignment**
- ◆ **Authorization Regime of Licensing for Mobile Services**
- ◆ **Spectrum Allocation for Mobile Services, PMR and Short Range Devices**
- ◆ **Forthcoming Plans**

Role of NCC

- ◆ Regulation of communications resources
- ◆ Implementation of regulatory policies
- ◆ Licensing and frequency assignment
- ◆ Spectrum monitoring and enforcement
- ◆ Radio equipment inspection

Licensing Regime



Vertical Framework

Licensing and Frequency Assignment

- ◆ The service license can be issued by beauty contest or auction.
- ◆ Under Article 48 of Telecommunications Act, the public service licenses (public mobile, broadcasting and fixed services) are issued with the assigned radio frequencies.
- ◆ The frequencies are withdrawn once the service license is revoked.
- ◆ Neither a service license nor an assigned frequency is tradable, though mergers among licensees are allowed.

Authorization Regime of Licensing for Mobile Services

- ◆ Beauty contest
 - 2G licenses (900 & 1800 MHz)

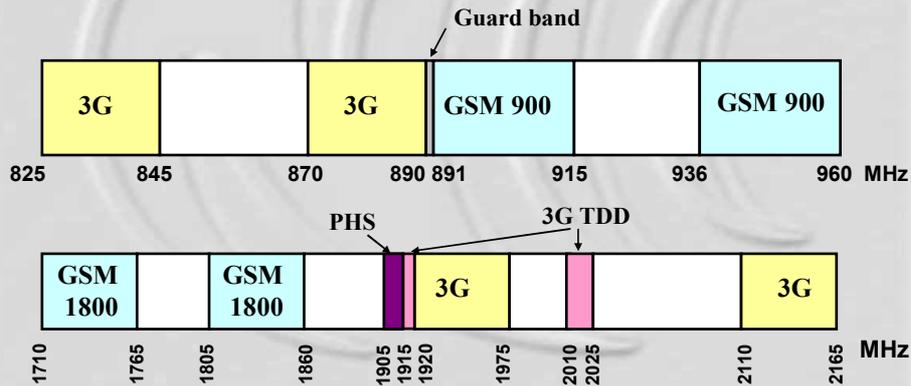
Budget Law amended in 1998

Article 94: Unless otherwise provided for by law, grant of quota, frequency, or other limited or fixed amount special licenses shall be conducted by open auction or public invitation to tender.

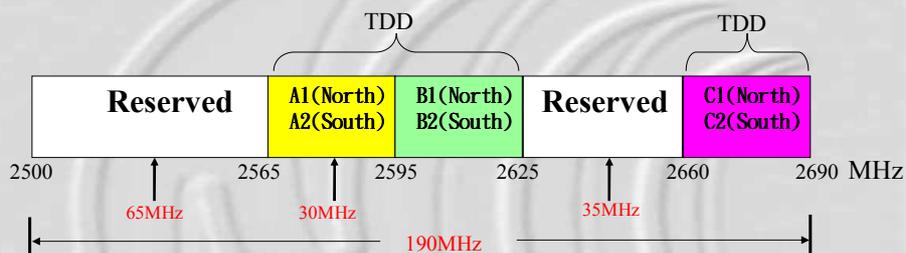
- ◆ Prequalification + Auction
 - 3G
 - 1900 MHz low power cordless telephone (PHS)
 - Broadband Wireless Access (BWA)

Spectrum Allocation for Cellular Services

- ◆ GSM: 900, 1800
- ◆ 1900 MHz low power cordless telephone (PHS)
- ◆ 3G



Spectrum Allocation for BWA Service



- Spectrum release in 2 stages
 - 6 licenses awarded in July 2007
 - 100 MHz spectrum reserved

Spectrum Allocation for PMR

Current Status

- ◆ No dedicated spectrum blocks for Private Mobile Radio Service (PMR)

To improve
spectrum
management

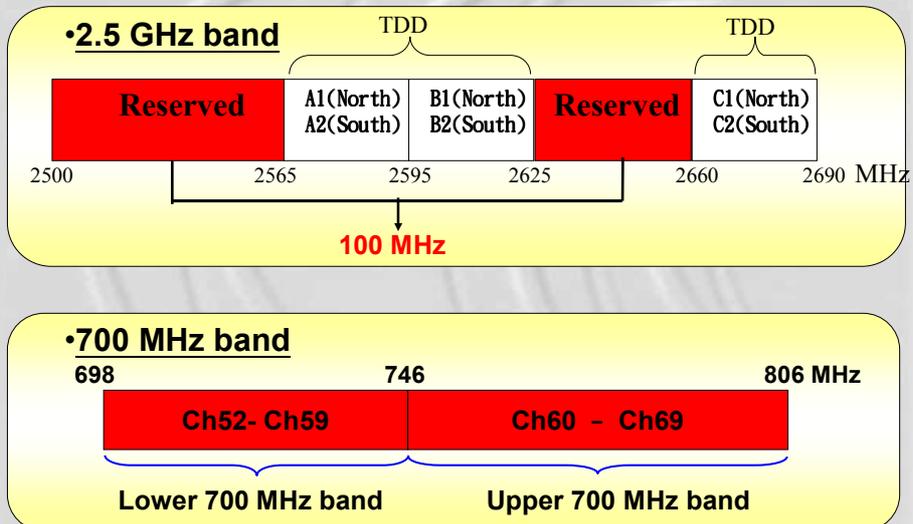
Proposed spectrum blocks

- ◆ 3-76 MHz
- ◆ 138-174 MHz
- ◆ 380-450 MHz & 470-530 MHz

Short Range Devices (SRDs)

- ◆ **WLAN**
 - ◆ 2.4 GHz band (2400-2483.5 MHz)
 - ◆ 5.25 – 5.35 GHz : for U-NII indoor use
 - ◆ 5.47 – 5.725 GHz & 5.725 – 5.825 GHz : for U-NII use
- ◆ **RFID**
 - ◆ 922 – 928 MHz: for RFID use
- ◆ **Vehicle radar systems**
 - ◆ 76 – 77 GHz

Forthcoming Plans in New Spectrum for Mobile Communications



Questions

1. What is the process of frequency assignment for non-government applicants requesting spectrum that has been allocated in the shared government/non-government bands under the Table of Frequency Allocations in your country ?
2. Can non-government (government) applicants request spectrum that has been allocated in exclusive government (exclusive non-government) band? If yes, what is the process of frequency assignment?



**Thank You for Your
Attention**