OVERVIEW OF SPECTRUM REGULATION IN GHANA
Outline

- Policy, Legal & Regulatory Environment
  - Unregulated Spectrum Use
  - Methods for the Award of Spectrum
  - Spectrum Fees
- Overview of Major Spectrum Bands
Policy, Legal & Regulatory Environment

- **Policies**
  - Information And Communications Technologies For Accelerated Development (ICT4AD) Policy, 2003
  - National Telecommunications Policy (NTP), 2005

- **Laws**
  - National Communications Authority Act, 2008 (Act 769)
  - Electronic Communications Act, 2008, (Act 775)
  - Electronic Communications (Amendment) Act, 2009, (Act 786)
  - Electronic Communications (Amendment) Act, 2016, Act 910

- **Regulations & Guidelines**
  - Subscriber Identity Module Registration Regulations, 2011, L.I. 2006
  - Interconnect Clearinghouse Regulations, 2016, L.I.2234
  - Guidelines for the Deployment of Communications, Infrastructure, 2010

Electronic Communications Act, 2008, Act 775

- Section 2: NCA to regulate the radio spectrum designated or allocated for use by broadcasting organisations
- Section 58: NCA to control, plan, administer, manage and license the radio frequency spectrum for telecommunication
  - comply with the applicable standards and requirements of the International Telecommunication Union and its Radio Regulations
- Section 62: operate frequency monitoring stations
- Section 64: ensure access to the space segment

National Communications Authority (NCA) Act, 2008, Act 769

- Section 3(d) regulate and monitor licensees, holders of frequency authorisations
- Section 3(g) determine applications for communication licences including frequency authorisations
- Section 3(j) establish a frequency plan and monitor any frequency allocated to the communications industry;
- Section 3(k) investigate and resolve disputes related to harmful interference with frequency
Unregulated Spectrum Use

- No unregulated spectrum in Ghana
  - Section 9 of Act 775 - A person shall not use a spectrum for designated services without a frequency authorisation granted by the Authority.

- Section 1(2) of Act 775 exempts
  - Frequency use by military and other security agencies
  - Cases where the frequency will be used by an individual or business entity such that the equipment comprised in the communication system is situated
    - in a single set of premises in single occupation and the transmissions from the equipment are confined to the premises, or
Methods for the award of Spectrum Authorisations

- Section 58(8) of Act 775
  - Auction
  - Tender
  - At a fixed price, or
  - Based on stated criteria.
Spectrum Fees

- **Section 2 of Act 775**
  - The Authority shall charge fees that it determines for a frequency authorisation.
  - The Authority may waive fees wholly or in part for the grant of a frequency authorisation in rural areas.

- **Section 10 of Act 775**
  - Frequency authorisation holder shall pay specified fees.

- **Section 13 of Act 775**
  - Default in fee payment is grounds for suspension or revocation of frequency authorisation.
OVERVIEW OF SOME MAJOR FREQUENCY BANDS
TV Broadcasting Band & Digital Dividend

- **UHF TV Band [470-862MHz; CH21 – CH69]**
  - 1 lot in 800MHz band sold for US$67.5million
  - 700MHz unsold

- **694-862MHz [CH49 – CH69]** saved through the migration
  - Allocated for mobile service

- **1 lot in 800MHz band sold for US$67.5million**

- **700MHz unsold**
450MHz Band Allocation

Overview of Spectrum Regulations in Ghana
GSM 800/900 MHz BAND

Overview of Spectrum Regulations in Ghana
GSM 1800 MHz BAND

Overview of Spectrum Regulations in Ghana
3G BAND ALLOCATION

[Diagram showing 3G band allocation with different color-coded bands and labels for Vodafone, Airtel, Globacom, Tigo, and MTN.]
2.3 GHz BAND ALLOCATION

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2290 - 2312</td>
<td>22 MHz</td>
</tr>
<tr>
<td>2312 - 2322</td>
<td>10 MHz</td>
</tr>
<tr>
<td>2322 - 2337</td>
<td>15 MHz</td>
</tr>
<tr>
<td>2337 - 2367</td>
<td>30 MHz</td>
</tr>
<tr>
<td>2367 - 2397</td>
<td>30 MHz</td>
</tr>
<tr>
<td>2397 - 2400</td>
<td>3 MHz</td>
</tr>
</tbody>
</table>

**U2 ONLINE**
- FREE

**INTERNET GHANA LTD**
- BUSINESS TECHNOLOGIES LTD
- BUSYINTERNET LIMITED
- FREE
2.6 GHz band
3100 MHz

NOTE: The band is allocated to Radiolocation, Earth Exploration Satellite and Space Research
3.3 GHz BAND ALLOCATION

- **AFRICA ONLINE**
- **GAINTELECOM**
- **Reserve**
- **DTT PROJECT(PROPOSED)**

30MHz
30MHz
30MHz
10MHz
### 3400 – 3600 MHz BAND

<table>
<thead>
<tr>
<th>3400</th>
<th>3430</th>
<th>3460</th>
<th>3490</th>
<th>3494</th>
<th>3500</th>
<th>3530</th>
<th>3540</th>
<th>3570</th>
<th>3590</th>
<th>3594</th>
<th>3600</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 MHz</td>
<td>30 MHz</td>
<td>30 MHz</td>
<td>4 MHz</td>
<td>30 MHz</td>
<td>10 MHz</td>
<td>30 MHz</td>
<td>20 MHz</td>
<td>4 MHz</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- ECOBAND
- Krouduh Limited
- TROPICAL SHEARWAY
- DISCOVERTEL
- COMSYS GHANA LIMITED
- INTERNET SOLUTION
- FREE
3600 – 3800MHz BAND ALLOCATION

3600 3615 3645 3800

15 MHz 30MHz 155 MHz

SUNBERRY GH. LTD.
SUPER TECH. LIMITED
UNASSIGNED
5000 – 6000 MHz

UNLICENSED SPREAD SPECTRUM BANDS

<table>
<thead>
<tr>
<th>Frequency Band</th>
<th>Power Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>5150 – 5250 MHz</td>
<td>Maximum mean EIRP = 200mW</td>
</tr>
<tr>
<td>5250 – 5350 MHz</td>
<td>Maximum mean EIRP = 200mW or Systems above 200mW, Maximum mean EIRP = 1W</td>
</tr>
<tr>
<td>5470 – 5725 MHz</td>
<td>Maximum mean EIRP = 1W</td>
</tr>
<tr>
<td>5725 – 5825 MHz</td>
<td>Maximum mean EIRP = 4W</td>
</tr>
</tbody>
</table>

Status of Band

1. Interested users must apply for the use of the band although it is unlicensed.
2. Fees are charged for the use of the band.