



# OVERVIEW OF SPECTRUM REGULATION IN GHANA



# Outline

- ❑ Policy, Legal & Regulatory Environment
- ❑ Spectrum Management Provisions
  - 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

- ✓ Electronic Communications Regulations, 2011, L.I.1991
- ✓ Mobile Number Portability Regulations, 2011, L.I. 1994
- ✓ Subscriber Identity Module Registration Regulations, 2011, L.I. 2006
- ✓ Interconnect Clearinghouse Regulations, 2016, L.I.2234
- ✓ Guidelines for the Deployment of Communications, Infrastructure, 2010

# Spectrum Management Provisions



## ❑ 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 with- out 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 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]

21	22	23	24	25	26	27
28	29	30	31	32	33	34
35	36	37	38	39	40	41
42	43	44	45	46	47	48
49	50	51	52	53	54	55
56	57	58	59	60	61	62
63	64	65	66	67	68	69
xx	Still Allocated for Broadcasting					
xx	Original TV Frequency now allocated for Mobile Service [Digital Dividend]					

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

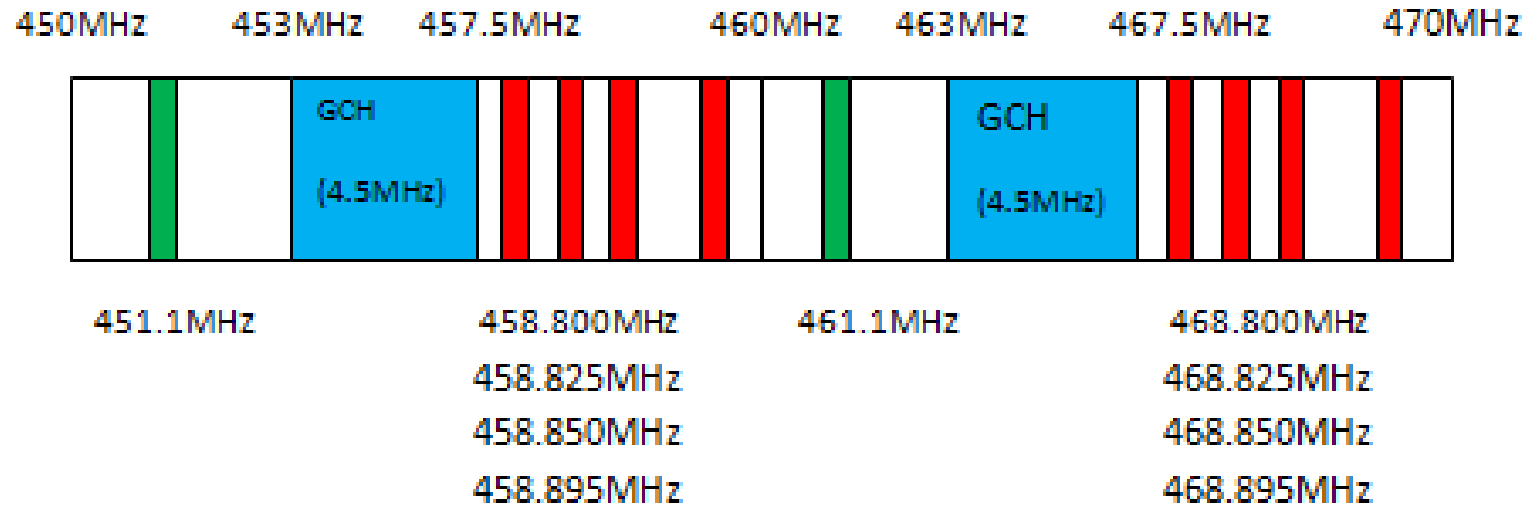
## 1 lot in 800MHz band sold for US\$67.5million






## 700MHz unsold

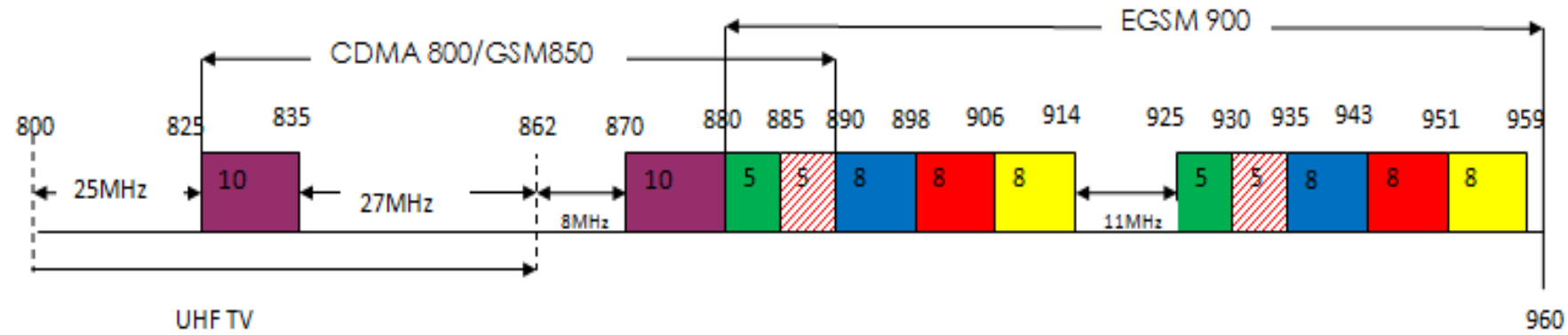








# 450MHz Band Allocation



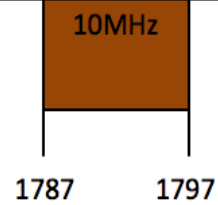
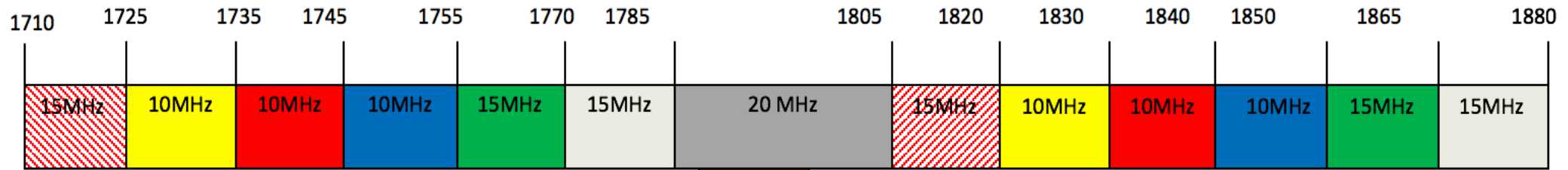
-  GHANA COMMUNICATION HEADQUARTERS (GCH)
-  ELECTRICITY COMPANY OF GHANA (ECG)
-  GHANA POLICE SERVICE (GPS)









# GSM 800/900 MHz BAND



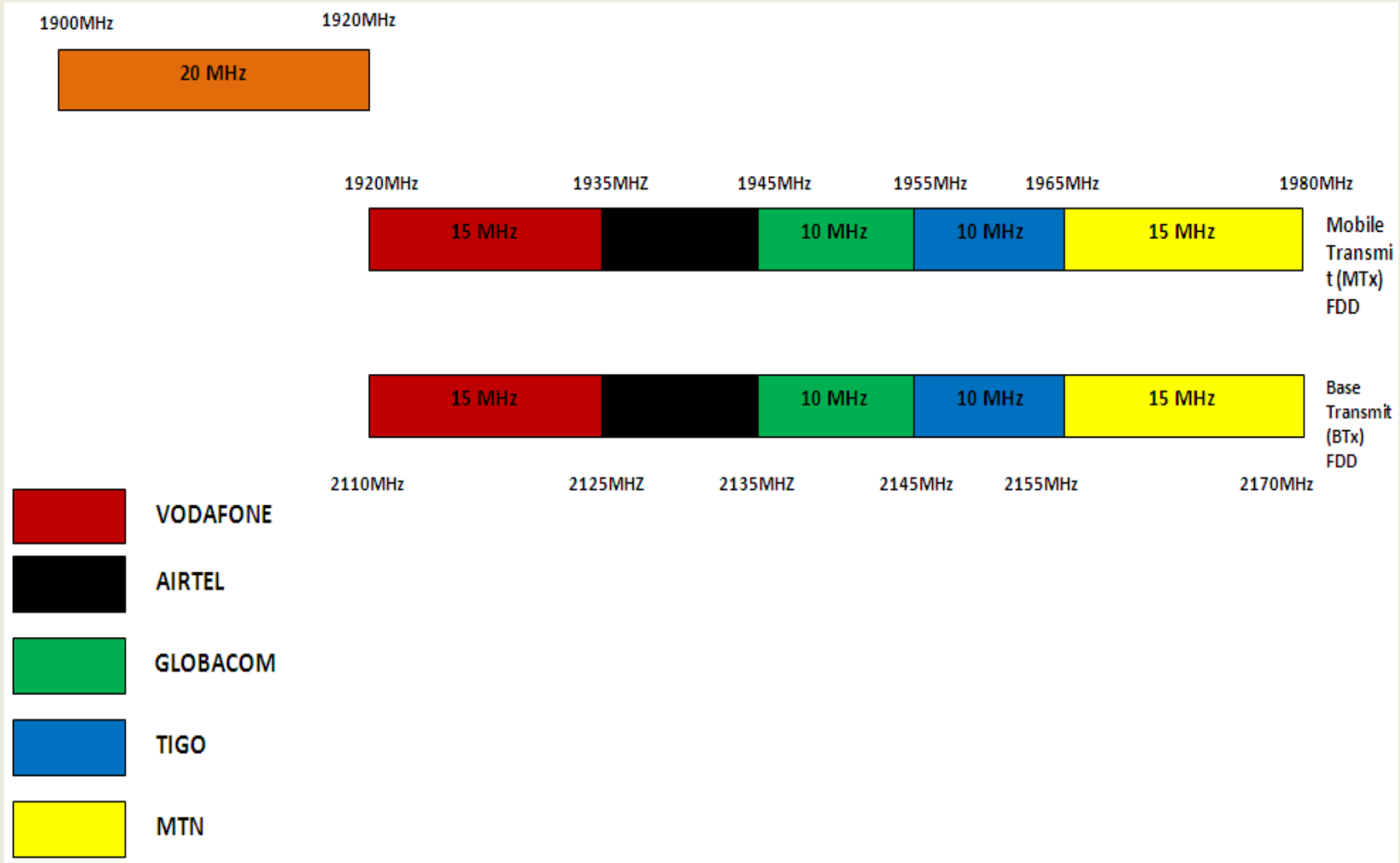
-  EXPRESSO GHANA (825-835/870-880)
-  GLOBAL COMM. (880-885/925-930)
-  AIRTEL GHANA (885-890/930-935)
-  TIGO GHANA (890-898/935-943)
-  VODAFONE GHANA (898-906/943-951)
-  MTN GHANA (906-914/951-959)

# GSM 1800 MHz BAND

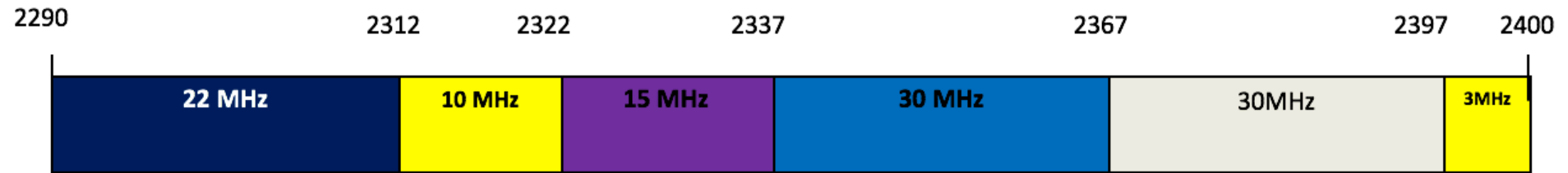


	AIRTEL
	MTN
	VODAFONE
	TIGO
	GLO
	TELESOL
	DUPLEX SEPARATION
	INFINITE STREAM

# 3G BAND ALLOCATION

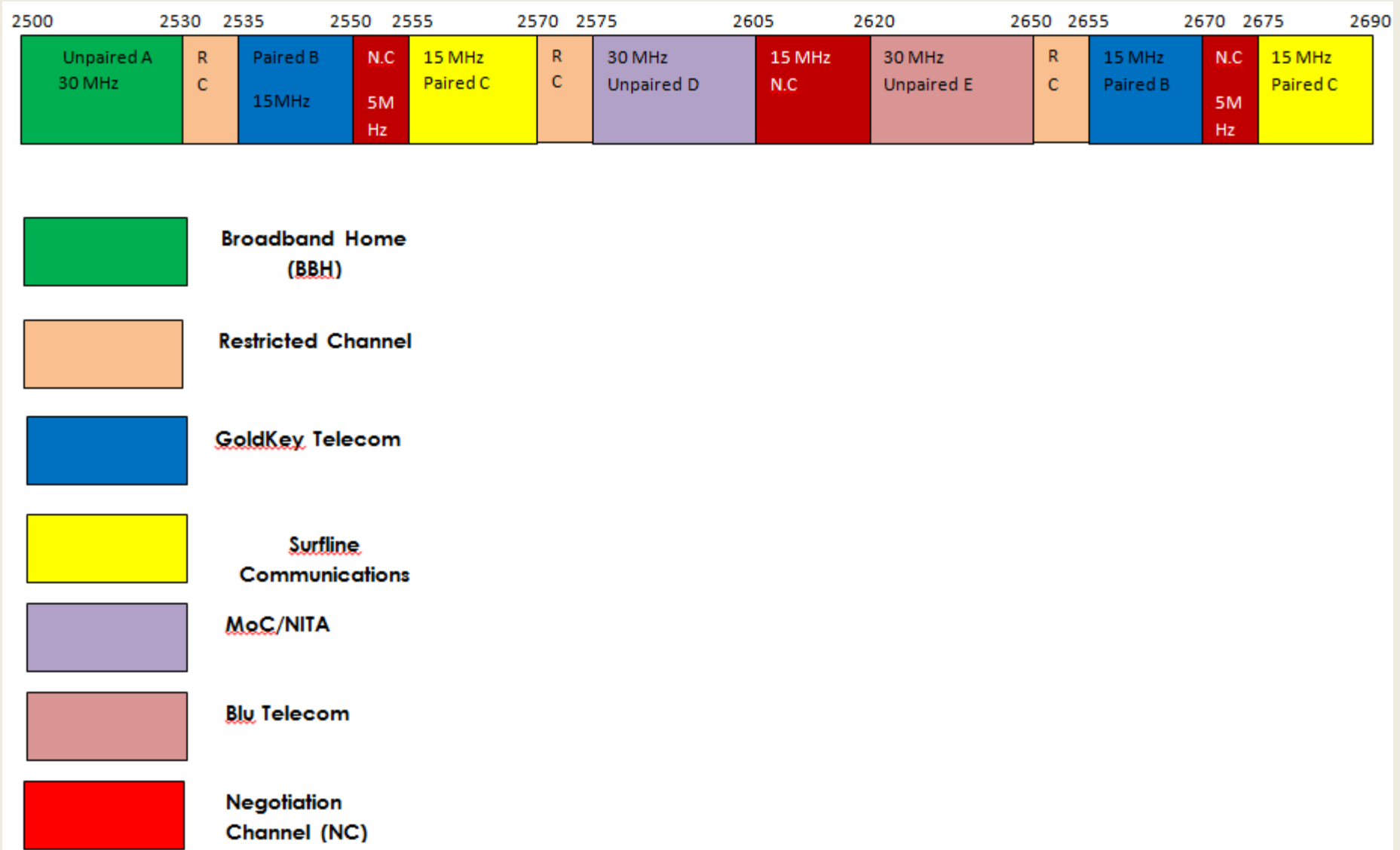


# 2.3 GHz BAND ALLOCATION




22MHz	U2 ONLINE
10 MHz	FREE
15 MHz	INTERNET GHANA LTD
30 MHz	BUSINESS TECHNOLOGIES LTD
30MHz	BUSYINTERNET LIMITED
3MHz	FREE

# 2.6 GHz band



# 3100 MHz

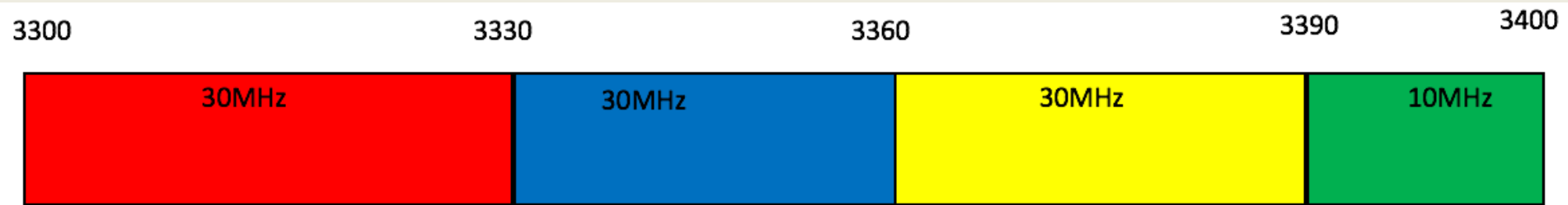






 - K-NET Limited

**NOTE: The band is allocated to Radiolocation, Earth Exploration Satellite and Space Research**

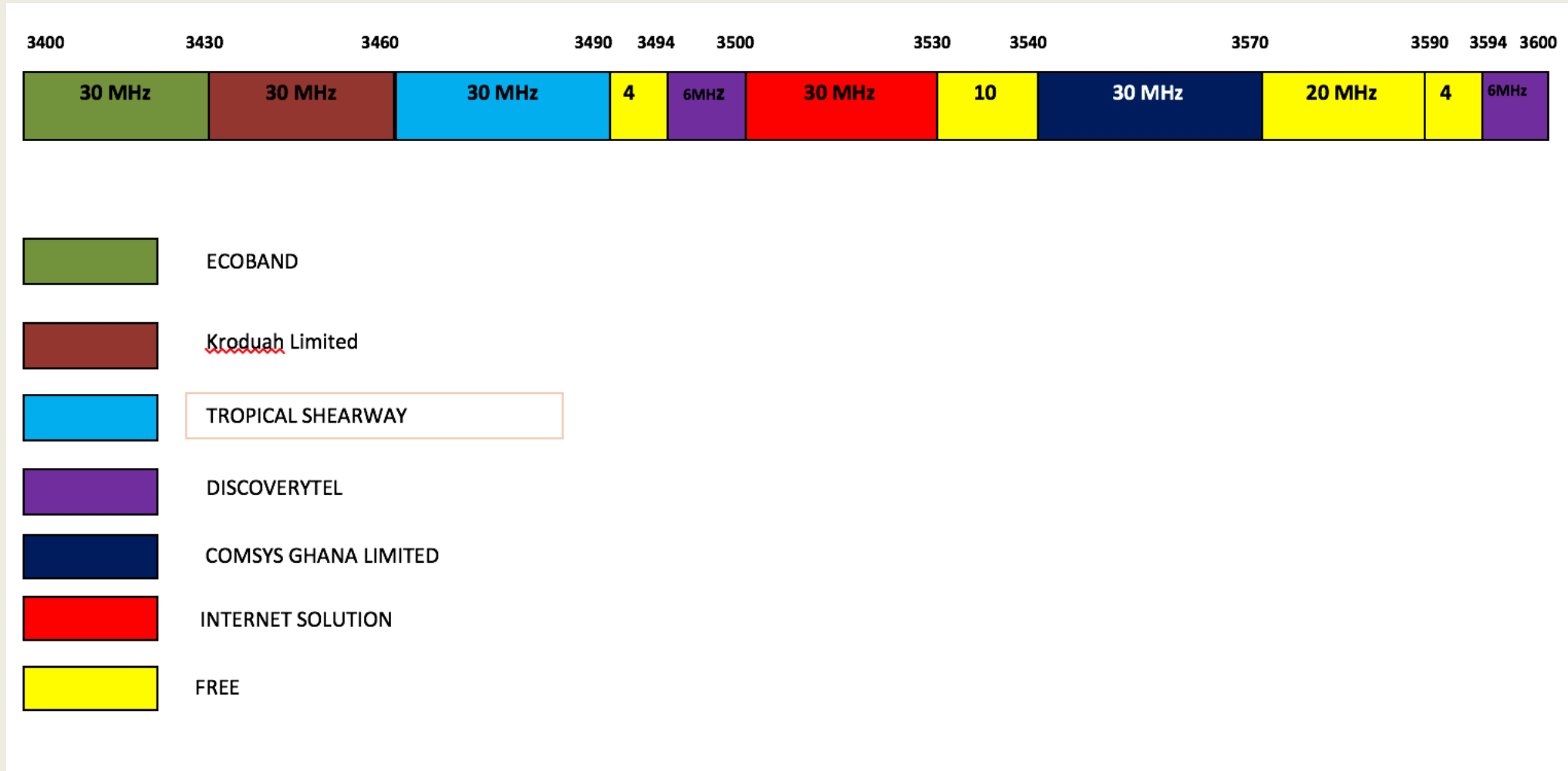


# 3.3 GHz BAND ALLOCATION



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

# 3400 – 3600 MHz BAND



# 3600 – 3800MHz BAND ALLOCATION



SUNBERRY GH. LTD.



SUPER TECH. LIMITED



UNASSIGNED

# 5000 – 6000 MHz UNLICENSED SPREAD SPECTRUM BANDS

