



Broadband Pricing Model

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Executive Summary: Pricing Models (1)

- ATDI proposes fees calculation based on the **opportunity cost as the leading pricing model** for all the wireless services
- The fees should be related to the propagation **characteristics of the frequencies and site location**
- Precedence to **rural coverage**, pricing is classified as: urban areas vs. rural areas
- ATDI proposes a **general, simple, functional and linear** pricing model

Executive Summary: Pricing Models (2)

- ZICTA may **consult** with stakeholders on RF pricing, before implementing the proposed pricing models
- Auctions define the **true value** per MHz of RF spectrum
- if **RF supply is higher than demand**; there is **no urgent need to advance Auctions**, as it wouldn't advance straightforwardly the wireless communications and rural coverage in Zambia

ZICTA's 'Other spectrum fees

$$S_f = F \times B_{(MHz)} \times \rho \times \sigma$$

S_f : stands for spectrum fee

F : stands for the fee as set by the Authority and applied in accordance with the frequency band of the spectrum assigned

$B_{(MHz)}$: stands for the total assigned BW

ρ : stands for re-use factor. This is equal to one for each specified region relating to which spectrum has been dedicated to a user and nine (09) in all cases where spectrum is dedicated to a user for the whole country

σ : stands for the sharing factor. This is equal to one (01) for each specified region relating to which spectrum has been dedicated to a user.

What is the difference between ρ & σ ?

ATDI proposes for all services a general functional form

$$\frac{S_f}{B} = F \times \rho \times S \times M_{pub}$$

S_f : Spectrum fee charged to licensee; unit: Kwacha

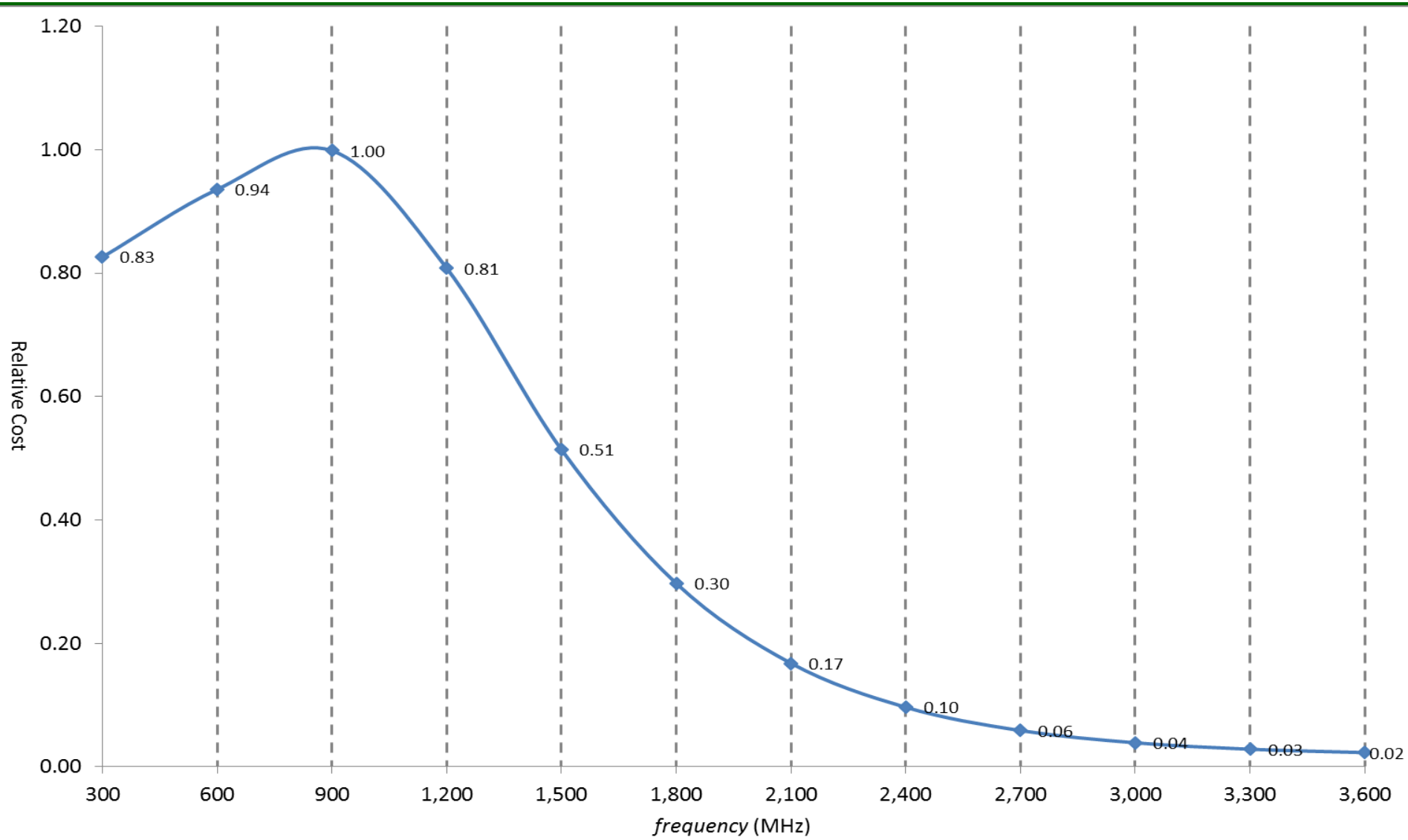
F : Coefficient (0-1) in accordance with the frequency band of the spectrum assigned

B : Bandwidth; unit: MHz

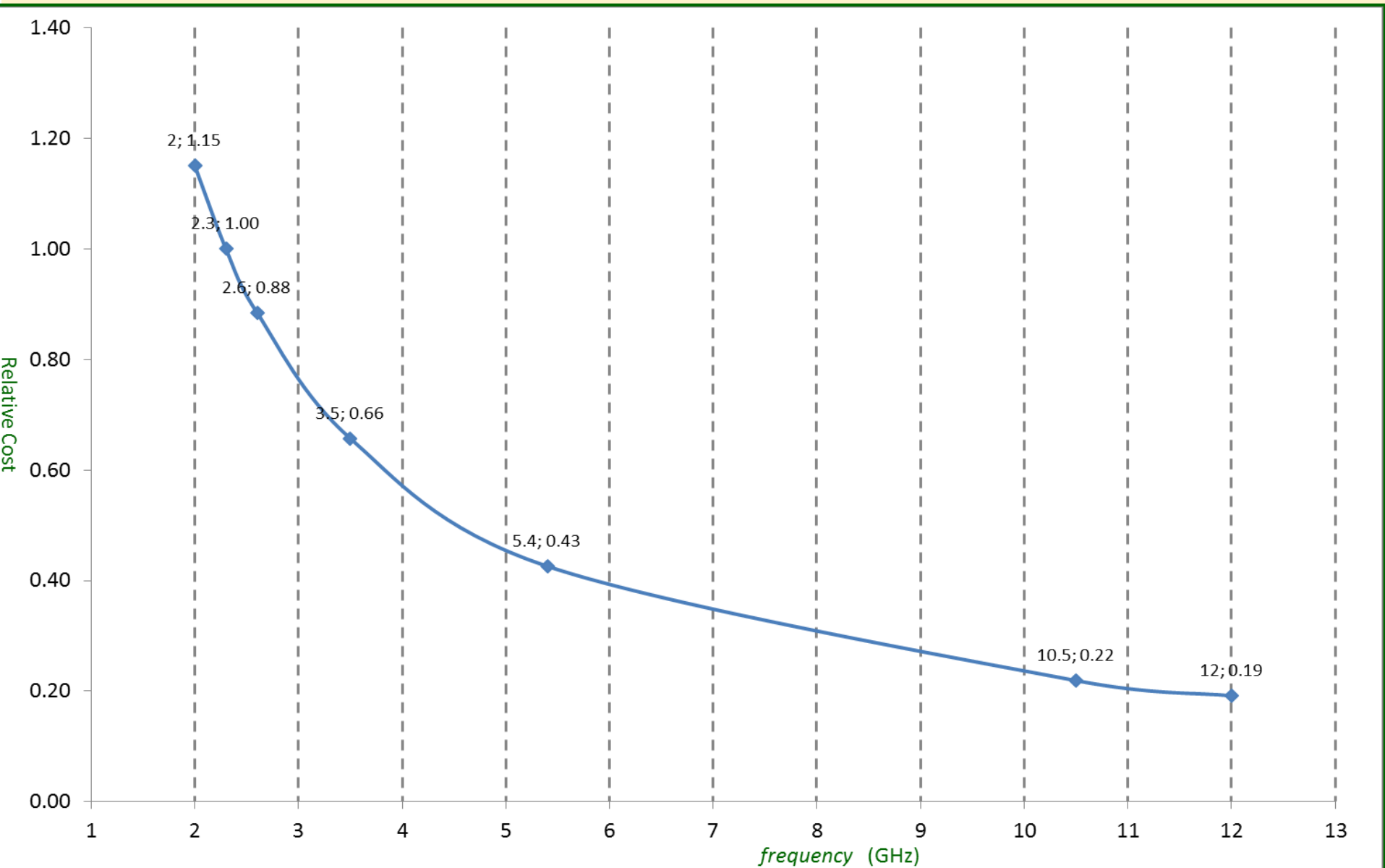
ρ : Re-use factor, equal one for each specified region to which spectrum has been dedicated to a user & 10 in all cases where spectrum is dedicated to a user for the whole country

S : Site location: major urban areas vs Rural Areas

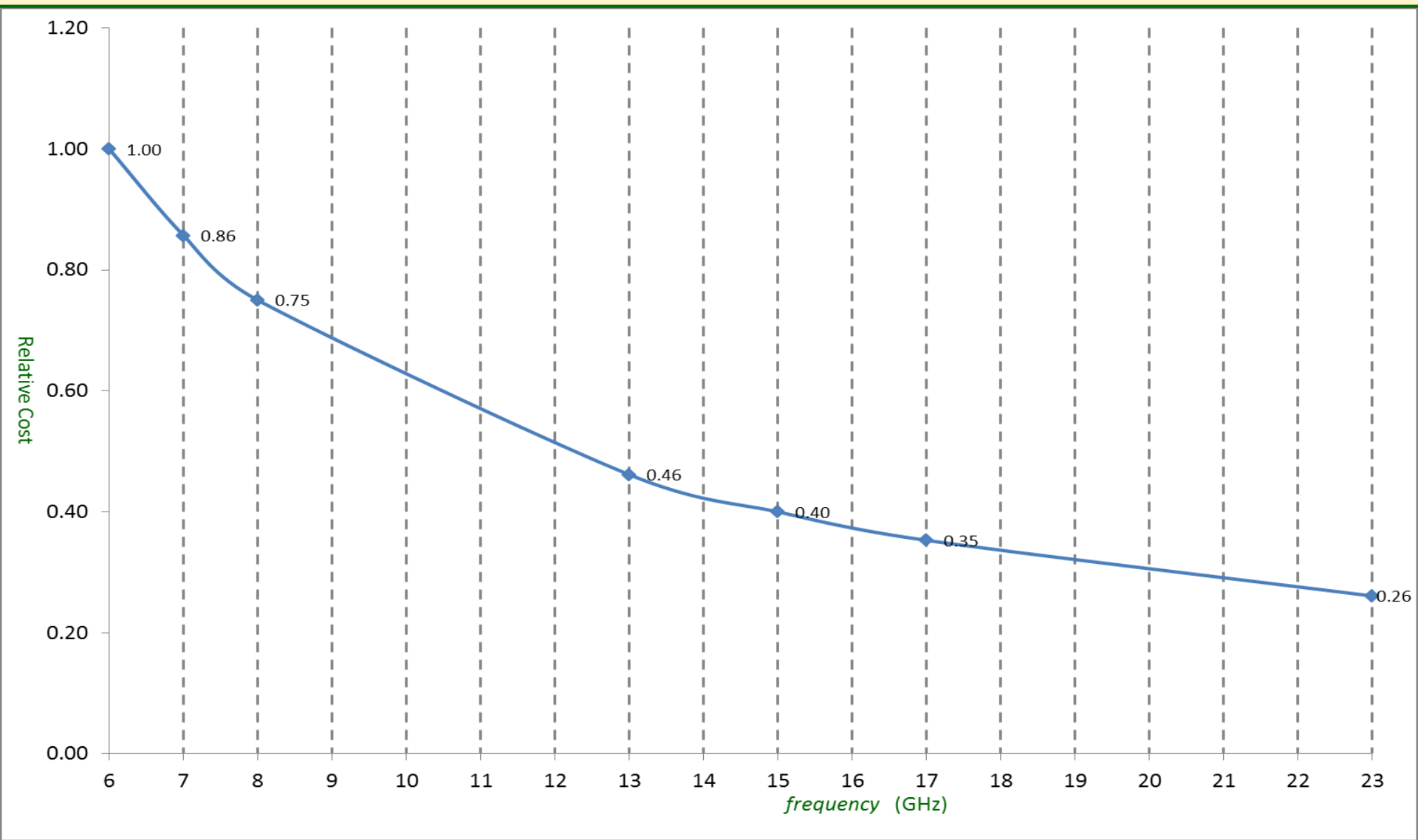
Land mobile fees as function of RF



BWA 2.3–10.5GHz coefficient F , as function of RF



P2P coefficient F as function of RF



Proposed max basic price unit M_{pub} (Kwacha/MHz) as function of Service

M_{pub}	Service	RF (MHz)	Max Annual Fee (Kwacha/MHz)
M_{pub_TV}	V/UHF TV	174–862	No change of annual fees
M_{pub_TV}	UHF TV	694–862	K40,000
M_{pub_cel}	Cellular	450–2,300	K400,000
M_{pub_BWA}	BWA	2,300–10,650	K80,000
M_{pub_PtP}	PtP	1,350–24,000	K100,000

Current and new fees per 1 MHz for national coverage

Current & new fees per 1MHz for national coverage

RF band	Current Fees	Proposed M _{pub}	Proposed national Fees FxM _{pub}
National Cellular			
GSM 880–960 (MHz)	Per 200KHz: K46,666.80		K1x400,000
3G 1,710–1,880 (MHz)	Per 1 MHz:		K120,000=0.3x400,000
2,100 (MHz)	K5x46,666.80= K233,334		K68,000=0.17x400,000
Broad Wireless Access (BWA)			
2.3GHz 2300–2400 (MHz)	Per 1MHz per province: K4,166.70. Per 1 MHz national K4,166.70x10= K41,667		K80,000=1.00xK80,000
2.5GHz 2500–2690 (MHz)			K77,440=0.88xK80,000
3.5GHz 3400–3600 (MHz)			K52,800=0.66xK80,000
5.4GHz 5470–5720 (MHz)			K34,400=0.43xK80,000
10.5GHz 10.15–10.3			K17,600=0.22xK80,000
10.5–10.65 (GHz)			K80,000
Fixed Links			
1.350 – 1.400GHz	Per transmitter K833.40		K400,000=4.00xK100,000
5.925 – 8.500GHz			K86,000=0.86xK100,000
10.70 – 12.50GHz			K50,000=0.50xK100,000
12.75 – 13.25GHz			K46,000=0.46xK100,000
14.50 – 15.35GHz			K40,000=0.40xK100,000
17.30 – 19.70GHz			K33,000=0.33xK100,000
22.00 – 24.00GHz			K26,000=0.26xK100,000
		K100,000	

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