SATELLITE COMMUNICATION IN MONGOLIA

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IDI – Asia and the Pacific

Economy	Regional rank 2013	Global rank 2013	IDI 2013
Korea (Rep.)	1	2	8.85
Hong Kong, China	2	9	8.28
Japan	3	11	8.22
Australia	4	12	8.18
Singapore	5	16	7.90
New Zealand	6	19	7.82
Macao, China	7	22	7.66
Brunei Darussalam	8	66	5.43
Malaysia	9	71	5.20
Thailand	10	81	4.76
Maldives	11	85	4.71
China	12	86	4.64
Fiji	13	91	4.40
Mongolia	**14**	**92**	**4.32**
Iran (I.R.)	15	94	4.29
Viet Nam	16	101	4.09
Philippines	17	103	4.02
Indonesia	18	106	3.83
Sri Lanka	19	116	3.36
Bhutan	20	123	2.85
Cambodia	21	127	2.61

			113	3.31	-3
			126	2.58	3
			127	2.54	0

Myanmar	28	150	1.82	148	1.75	-2
Afghanistan	29	155	1.67	155	1.57	0
Average*			4.57		4.42	

ICT Development Index (IDI), 2013

Economy	Rank 2013	IDI 2013
Maldives	85	4.71
China	86	4.64
Jordan	87	4.62
Ecuador	88	4.56
Egypt	89	4.45
South Africa	90	4.42
Fiji	91	4.40
Mongolia	**92**	**4.32**
Cape Verde	93	4.30
Iran (I.R.)	94	4.29
Mexico	95	4.29
Morocco	96	4.27
Jamaica	97	4.26
Suriname	98	4.26

Area: **1,564,115.75** km^2 **(19th), 603.909** sq.mi
Population: 2015 census of **3.0 million,**
Density 1.84 km^2 **(236th)**

MILESTONES

1970: Establishment of satellite earth station "Orbit"

1971: Member of "Intersputnik" international organization for satellite communication

1979: Broadcasting USSR's TV

1981: International gateway /8 channels UB-Moscow/

1991: TV broadcasting via Asiasat /1 channel/

1993: Int'gateway /30 channels UB-Beijin/, Int' gateway /8 channels UB-Tokio/

1997: Member of "Intelsat" international organization for satellite communication

1998: Installation first VSAT station's

1999 : TV broadcasting via Intelsat /1 channels/

2004 : TV broadcasting via Intelsat /1 channels/

2008: TV broadcasting via Apstar V /90 channels/

CURRENT REGULATORY FRAMEWORK

LAW

- **Law on Communication (1995)**
- **Law on Radio Wave (1999)**
- **Law on Licensing Business Activities (2001)**

POLICY PAPERS:

- **"The Millennium Development Goals (MDGs)-based Comprehensive National Development Strategy"** approved by Parliament of Mongolia in 2008.

- **"Mongolian National satellite project"** approved by Mongolian Government in 2012.

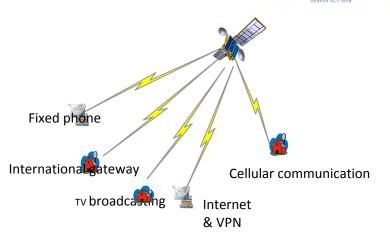**ADMINISTRATION UNIT:**

INFORMATION TECHNOLOGY, POST AND TELECOMMUNICATION AUTHORITY

REGULATOR:

COMMUNICATIONS REGULATORY COMMISION OF MONGOLIA

EXISTING SATELLITE SERVICES

1. Fixed phone service
2. International gateway
3. TV broadcasting
4. Satellite broadband Internet & VPN
5. Cellular communication
6. Iridium – satellite mobile communication
7. GNSS – satellite positioning equipment

Fixed phone

International gateway

Cellular communication

TV broadcasting

Internet & VPN

Bandwidth of current communications satellites in use in Mongolia is 400.1 MHz.

Satellites being used:
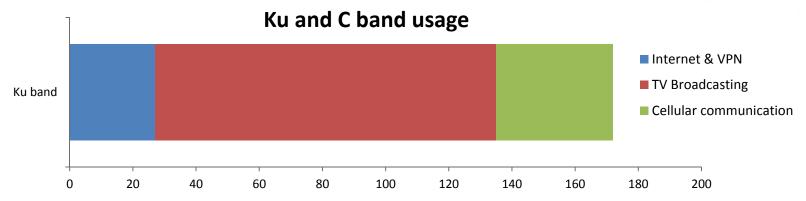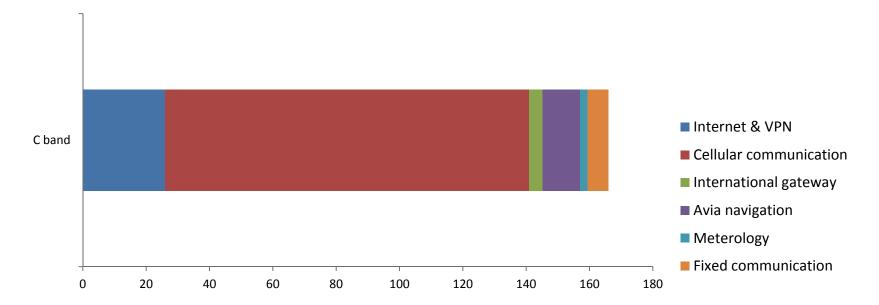
- Intelsat 906 (C)
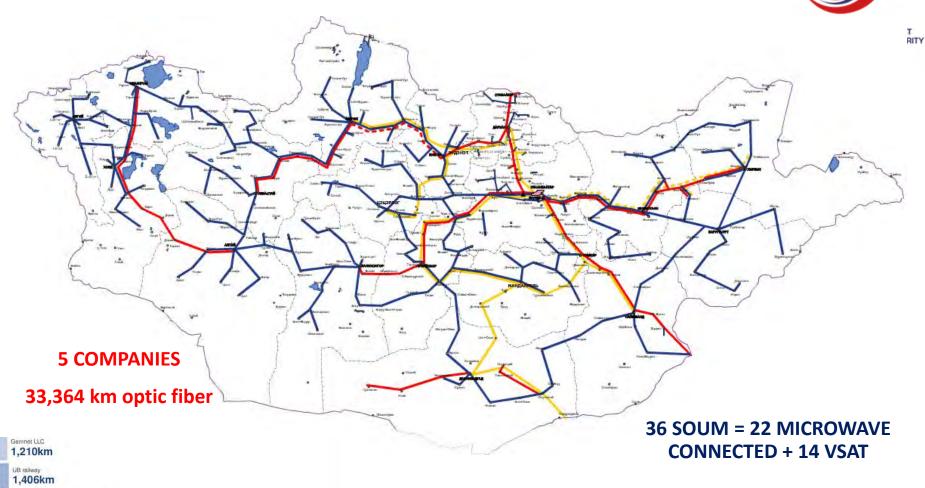- Intelsat 20 – (Ku)
- Apstar 5 – (Ku)

Ku and C band usage

Ku and C band usage

Ku band
- Internet & VPN
- TV Broadcasting
- Cellular communication

C band
- Internet & VPN
- Cellular communication
- International gateway
- Avia navigation
- Meterology
- Fixed communication

MONGOLIAN BACKBONE NETWORK

5 COMPANIES

33,364 km optic fiber

36 SOUM = 22 MICROWAVE CONNECTED + 14 VSAT

PROVINCE CENTER SPEED~ 2,5Gbit/s
SOUM CENTER SPEED ~ 155 Mbit/s

Gemnet LLC
1,210km

UB railway
1,406km

Skynetworks LLC
6,850km

Mobicom networks LLC
7,342km

NETCOM
16,556km

Total
33,364km

MOBILE NETWORK COVERAGE

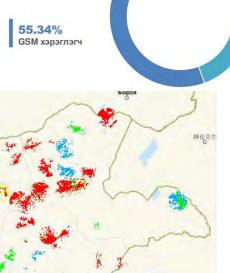4 OPERATOR COMPANY /MOBICOM, SKYTEL, UNITEL, G-MOBILE/

2G SERVICES IN ALL SOUMS CENTER

3G SERVICES IN 340 SOUMS AND TOWN CENTER

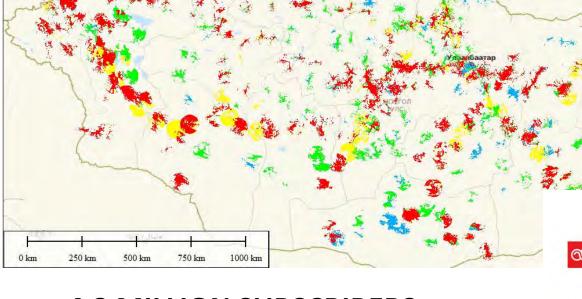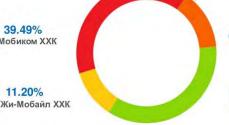2 AND MORE OPERATOR IN TOWN ~ 85%

1,5 MILLION SMARTPHONE USER

18.43%
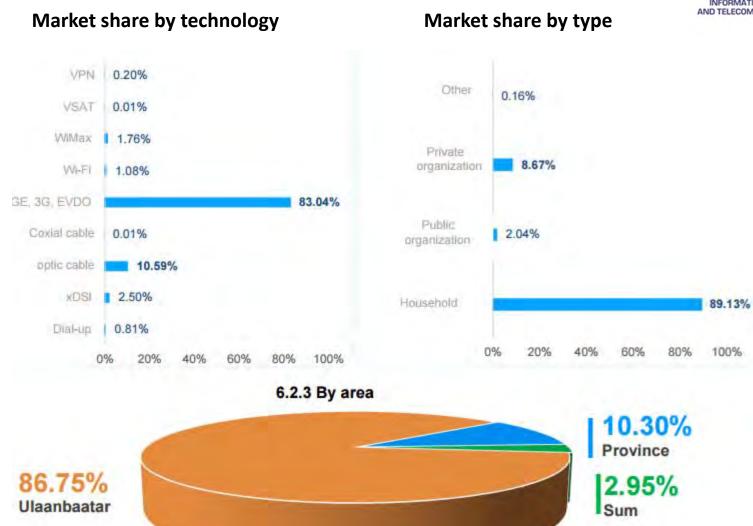CDMA хэрэглэгч

55.34%
GSM хэрэглэгч

26.23%
3G хэрэгэлэгч

4.3 MILLION SUBSCRIBERS

39.49%
Мобиком ХХК

13.78%
Скайтел ХХК

11.20%
Жи-Мобайл ХХК

35.53%
Юнител ХХК

NUMBER OF INTERNET SUBSCRIBERS

Market share by technology

Market share by type

Market share by technology:
- VPN: 0.20%
- VSAT: 0.01%
- WiMax: 1.76%
- Wi-Fi: 1.08%
- GE, 3G, EVDO: 83.04%
- Coxial cable: 0.01%
- optic cable: 10.59%
- xDSl: 2.50%
- Dial-up: 0.81%

Market share by type:
- Other: 0.16%
- Private organization: 8.67%
- Public organization: 2.04%
- Household: 89.13%

6.2.3 By area

- 86.75% Ulaanbaatar
- 10.30% Province
- 2.95% Sum

Market Share

50%
40%
30%
20%
10%
0%

17.71%
Cable

15.90%
IPTV

47.68%
Satellite

18.71%
MMDS

Satellite TV channels
National channels –   60
International channels - 30

Figure 1. Connection schema, high-speed Internet and telephone service to Administration, Hospital, Kinder garden, School and Public of SOUM.

CONCLUSION

- Lack of terrestrial backbone network in North-western and South-Eastern Part of Mongolia due to geographical condition. Satellite plays an important role in connecting Mongolia and serving the unserved areas.

  - Expanding business with other satellite service providers. (Intelsat, Apstar5 +)

  - Starting to use Ka band service

- Implementing National Satellite Project

  - Both private and public sectors in Mongolia already have sufficient experiences in using satellites for many years.

  - ITU's Planned Orbital Positions for Mongolia FSS-113.6°E, BSS-74°E

  - Mongolia has not utilized orbits allotted for satellite launching

Thank you