



INTERNATIONAL TELECOMMUNICATION UNION
Telecommunication Development Bureau
Telecommunication Statistics and Data Unit

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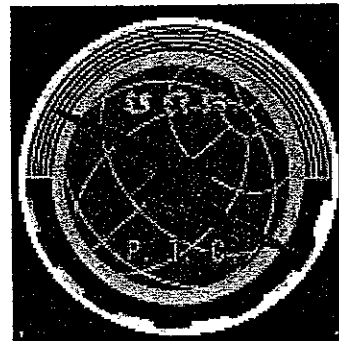
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Title: Current state of ICT in Cambodia

**ICT INDICATOR MEETING
ITU-GENEVA 15-17 JANUARY 2003**

Current state of ICT in Cambodia

MINISTRY OF POSTS AND TELECOMMUNICATIONS (MPTC)



General

- **Since 1997, Cambodia has introduced the Internet service for public. From day to day the business communication online growing very fast and getting profit from the Internet infrastructure. Small medium and large companies are starting with internet service base to do professional business with each other in the country and the world.**

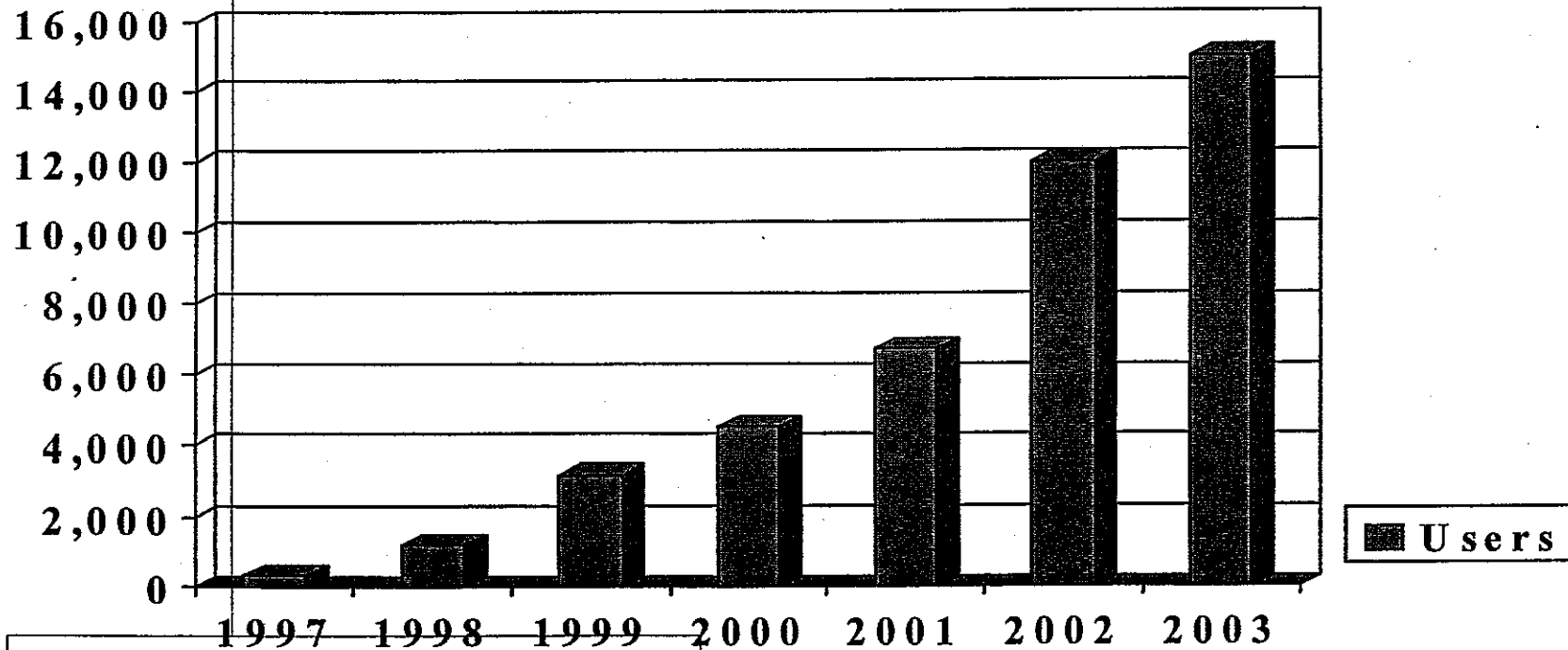
Internet Service Provider (ISP) in Cambodia

- Till now Cambodia has 7 ISP including one Email service provider

No.	1997	1998	1999	2000	2001	2002
1	Camnet					
2	BigPond & CogeTel					
3	Openforum					
4			CaminTel			
5					Mobitel	
6						Camshin
7						Casacom

Internet Users in Cambodia

- Estimation of total internet subscribers is around 12,000 at year 2002
- Most of users are in Phnom Penh city and Siem Reap province



DNS and Internet Cafe in Cambodia

- **Internet Café and DNS registration of ccTLD of KH are administrating under Ministry of Posts and Telecommunications Cambodia (MPTC)**
- **Estimation of internet Café in Cambodia is around 100 and Website with KH domain is around 250**
- **Total website in Cambodia is around 500**

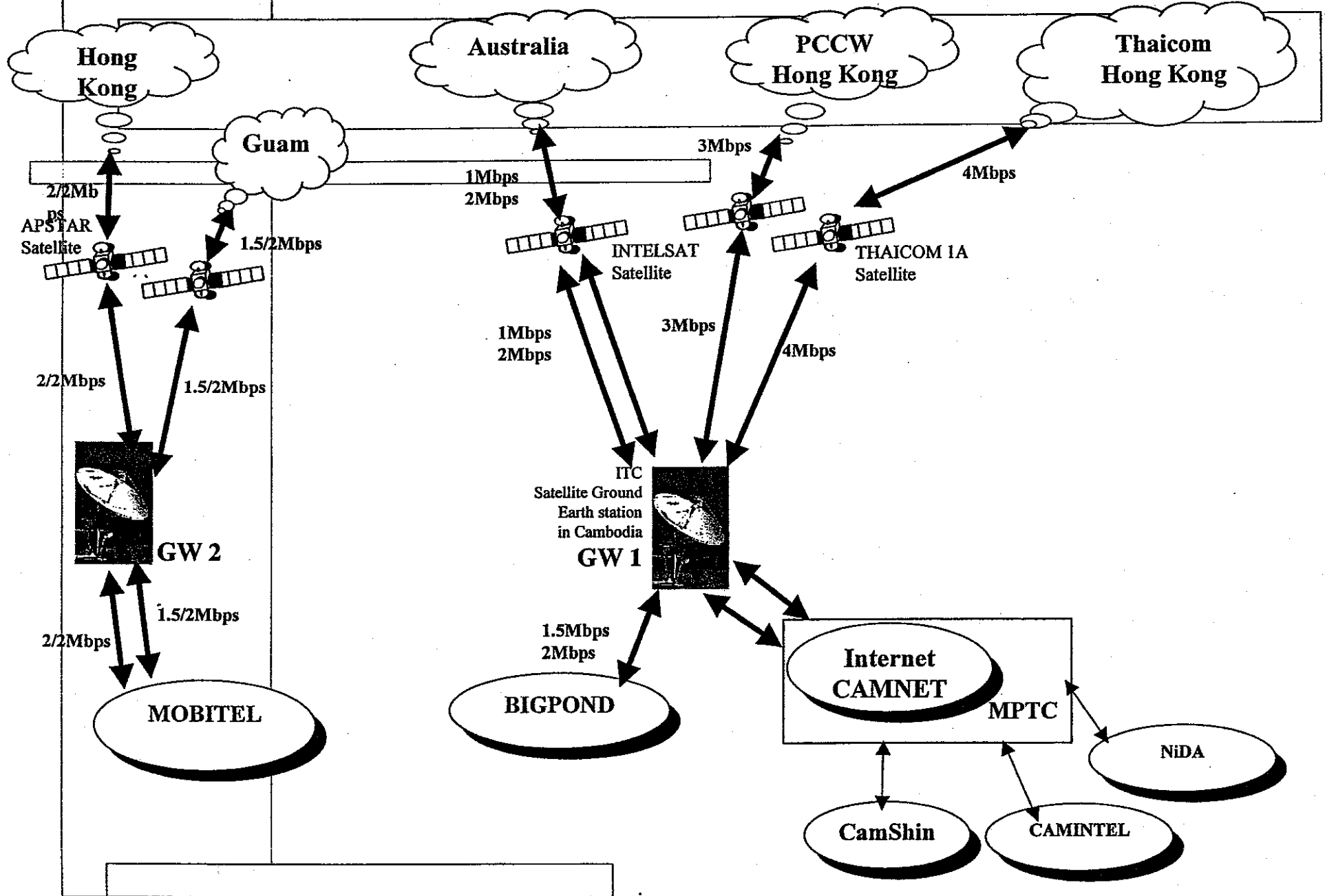
International Internet Backbone

- **All ISPs are using International Internet backbone via satellite and connecting to different countries in ASIA region and to the other countries in the world.**
- **CAMNET is an International Internet Exchange (IIX) of MPTC. Now backbone capacity is 4 Mbps and 3Mbbps full duplex via Hong Kong to US.**
- **BIGPOND is connecting to Australia with 3Mbps.**

... International Internet Backbone

- **MOBITEL is connecting to Hong Kong with 2Mbps/2Mbps(transmit/receive) and 1.5/2Mbps to Guam**
- **CAMINTEL is connecting to CAMNET with 512Kbps.**
- **Camshin is using 64 Kbps, connecting to Camnet**
- **Casacom is using 64 Kbps, connecting to BogiPond**

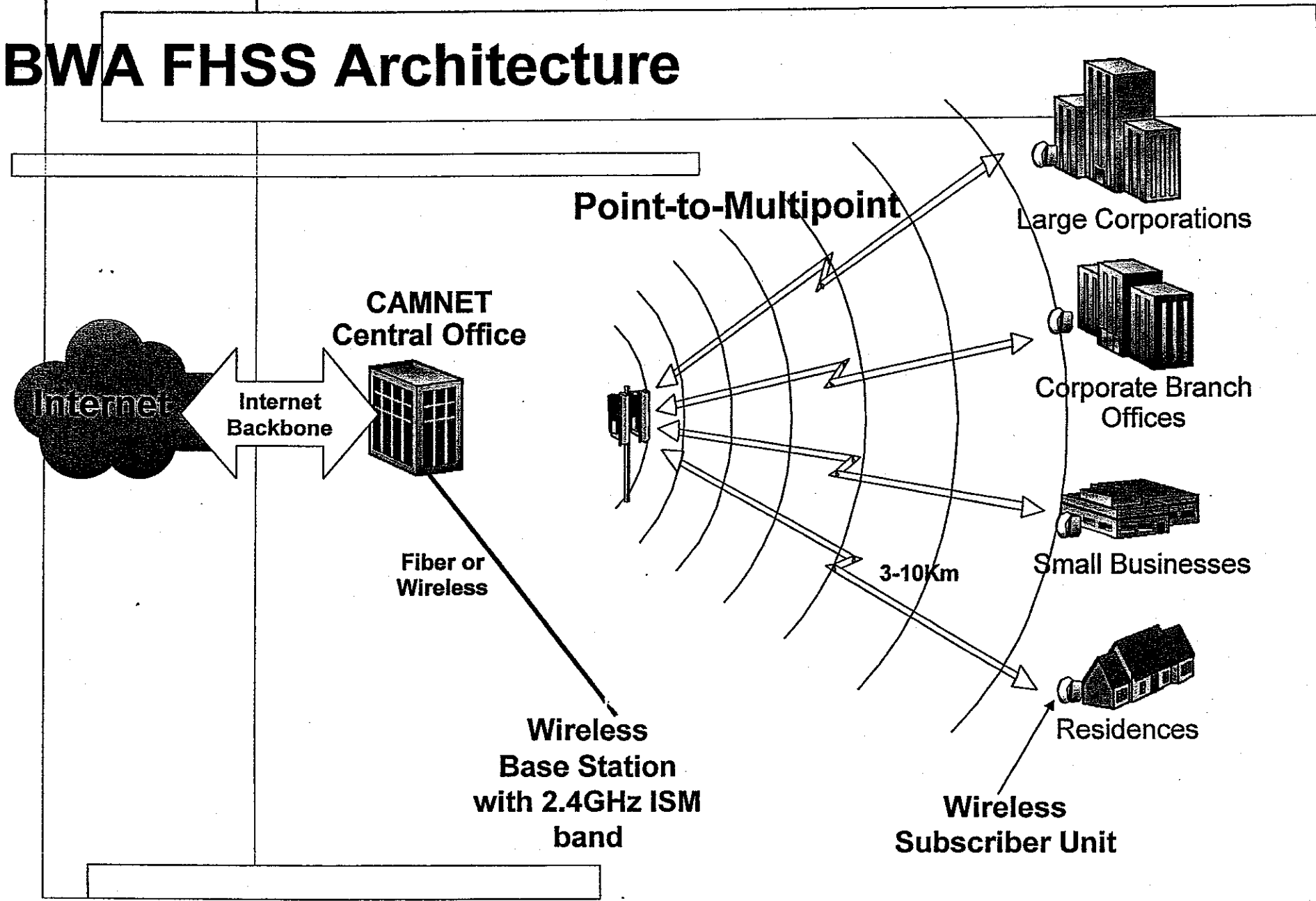
Internet Networking and Architecture



INTERNET ACCESS IN CAMBODIA

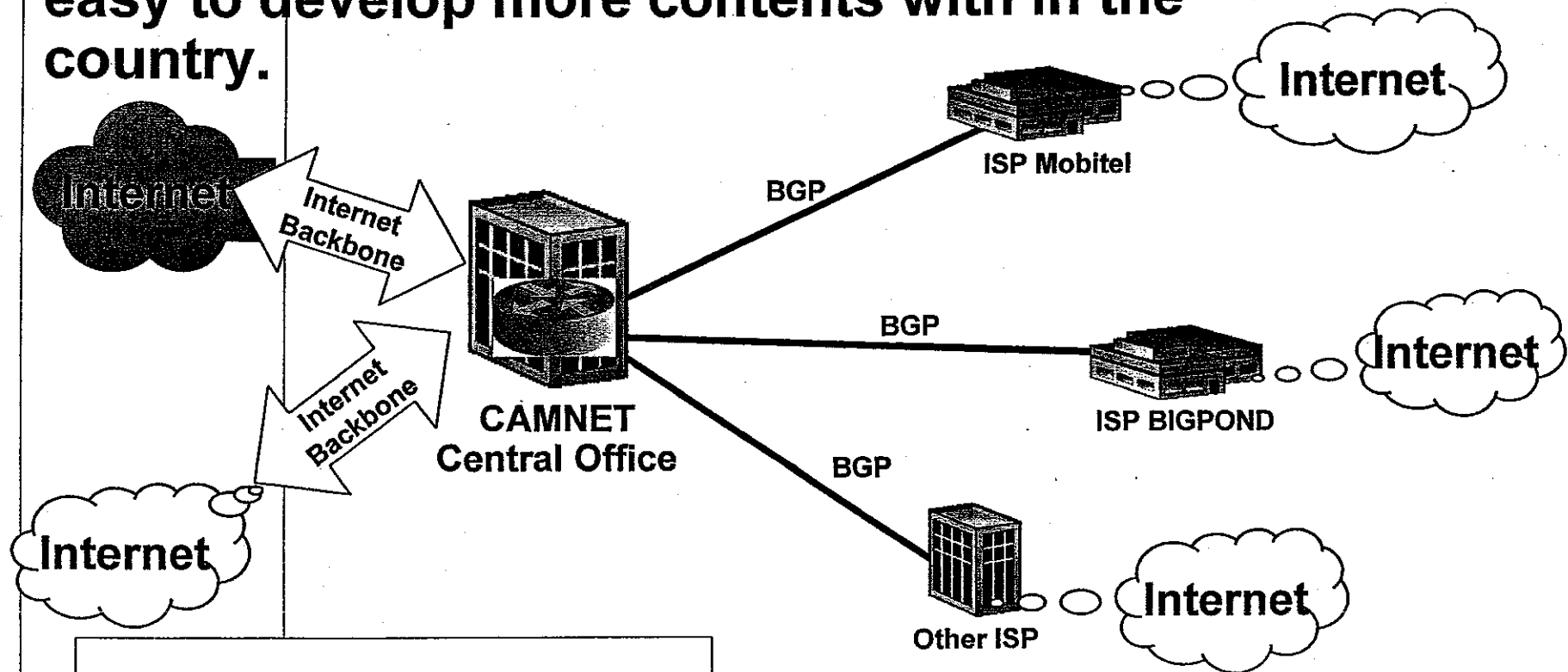
- **All Internet accesses in Cambodia are using dial-up with PSTN Telephone system.**
- **The testing service xDSL is providing by BigPond ISP.**
- **Leases Internet Service: From ISP to corporate user are using normal copper leased line of MPTC or Camintel.**
- **Cambodia has two BWA providers, CAMNET and Telesurf.**
- **The access speed on air with a great connection of 64Kbps up to 2Mbps using FHSS.**
- **The other type of BWA, called DSSS is under study and will offer service soon.**

BWA FHSS Architecture



International Internet Exchange (IIX)

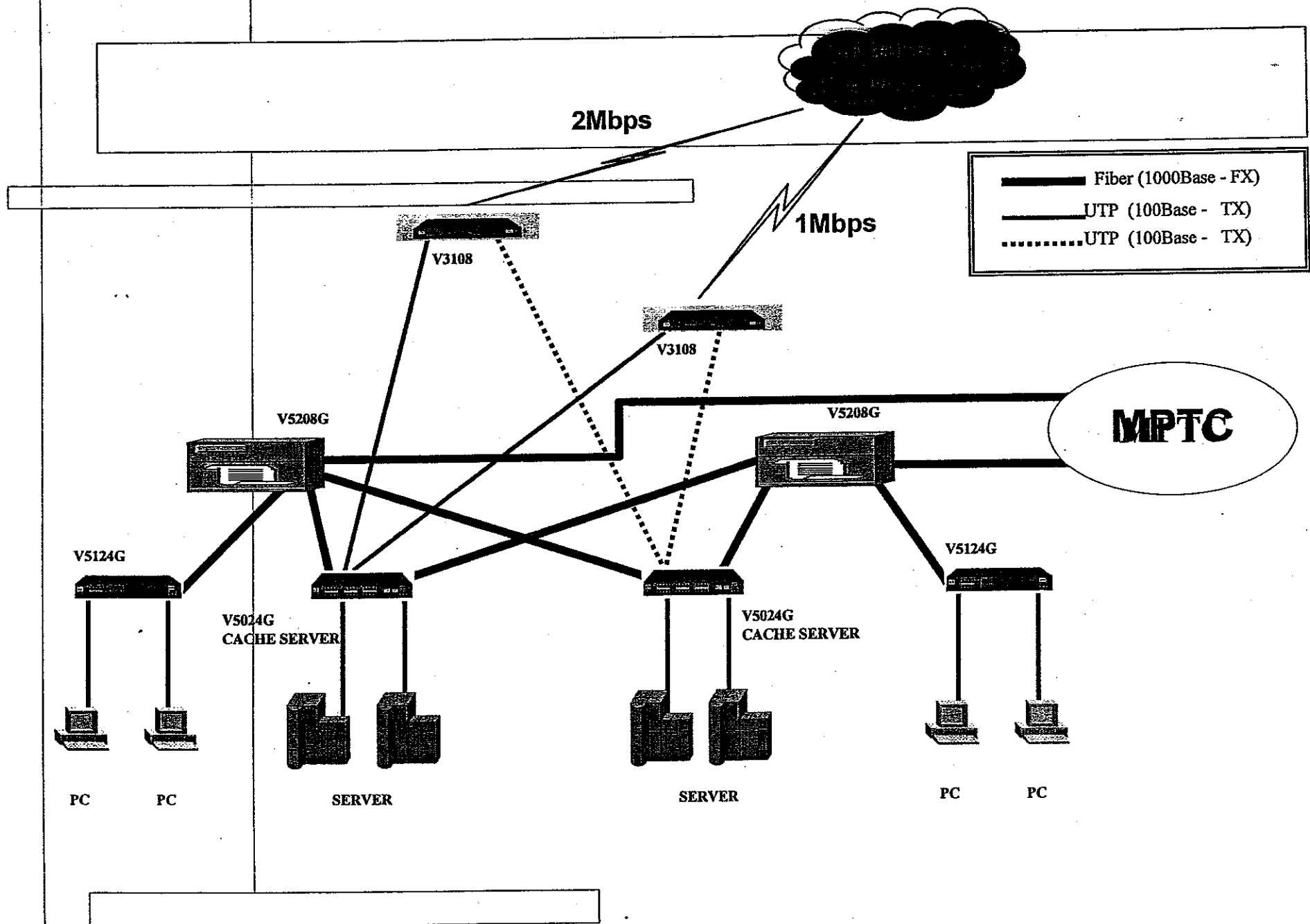
- Under regulation of MPTC, CAMNET is an International Internet Exchange (IIX) to provide the internet backbone local to other ISPs in Cambodia. The purpose of IIX is to secure the local internet connectivity and to reduce the traffic on the international backbone traffic and easy to develop more contents with in the country.



E-Government

- **Cambodian government has already launched e-government for all Ministries to have access all information with each other within Ministries and to other countries in the world.**
- **NiDA is an authority to organize and administrate on this e-government in Cambodia.**

NiDA NETWORK CONFIGURATION



E-COMMERCE DEVELOPMENT

- **Cambodia has not yet done with e-commerce, because we are on studying and preparing all processes.**
- **Part of security for e-commerce MPTC has already done for training of the Registration Authority (RA) by ITU under assistant of WISEKEY company to launch for public use**
- **To complete it Cambodia should prepare all technical and legislation parts that should related to e-commerce.**

Telecommunication Infrastructure General

- **The Fixed PSTN in Phnom Penh is provided by the Ministry of Posts and Telecommunications of Cambodia (MPTC).**
- **The Fixed PSTN in provincial cities is provided by CAMINTEL, a joint venture between the MPTC and INDOSAT of Indonesia.**
- **The Wireless local loop is provided by SHINAWATRA from Thailand and Cellular mobiles are provided by 4 private companies.**

... Telecommunication Infrastructure General

- **The technologies used are:**
 - **CASACOM using GSM 900 MHz**
 - **MOBITEL using GSM 900 MHz**
 - **CAMTEL using AMPS 800 MHz**
 - **SHINAWATRA using GSM 1800 MHz**
 - **The SK Telecom will provide a new CDMA technology soon.**

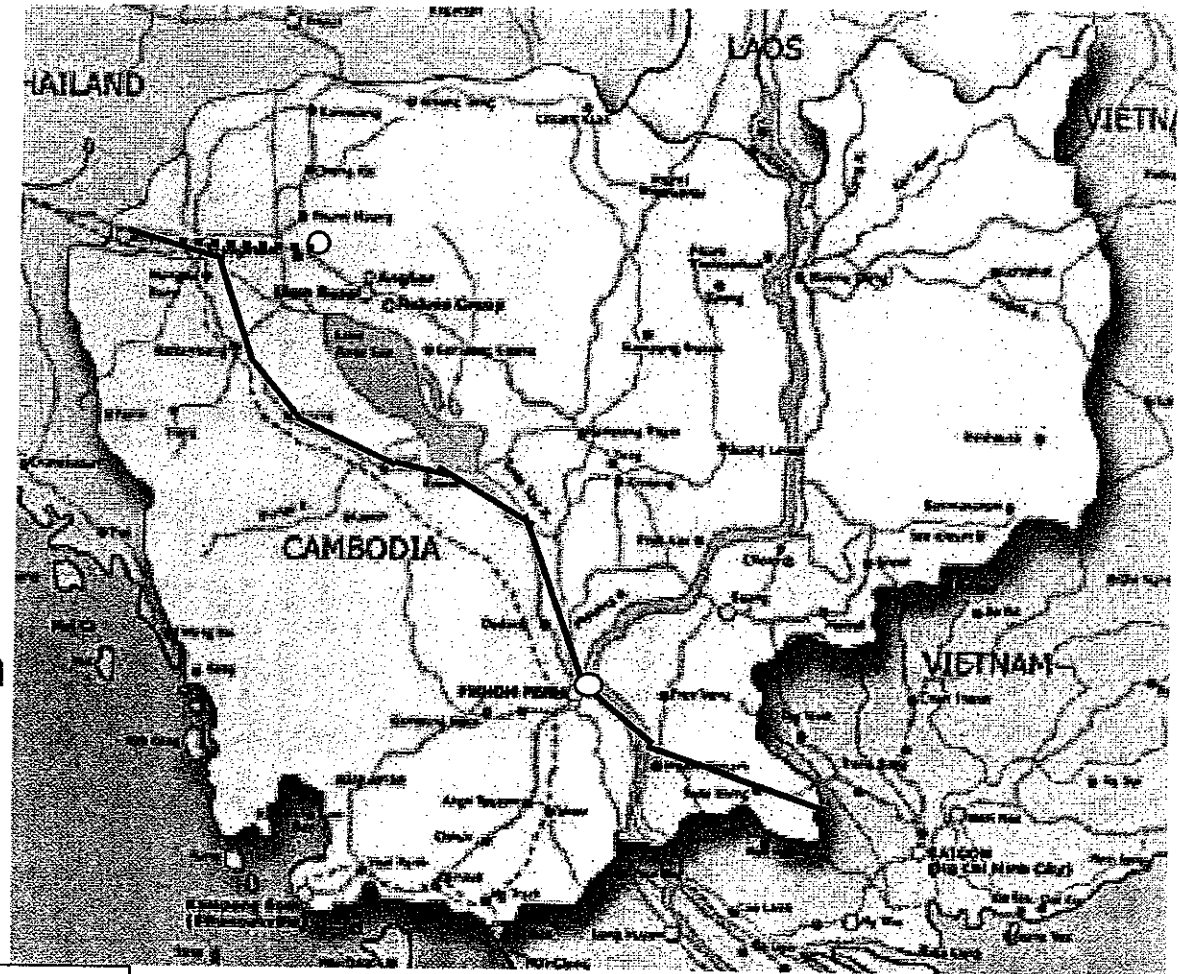
... Telecommunication Infrastructure General

- **In the telecommunications sector the entire country of 11.7 million people has only approximately 300,000 telephones. 75% of them are cellular mobile. The telephone density is only 0.3 per 100 people for fixed PSTN (Public Switch Telephone Network) and if we also include cellular phones the density is merely 1.2 per 100 people. The telephone service is concentrated mainly in the capital and provincial cities and almost non-existent in the outlying rural areas.**

... Telecommunication Infrastructure General

Map of Cambodia

- Optical fiber is already introduced service in the country from Vietnam boarder to Thailand boarder, funded by Germany government.
- In the other area from south to north of Cambodia, the transmission from Phnom Penh city to those provinces are using microwave and local satellite system.



FUTURE PLAN

- **In the future Cambodia will increase the International backbone connection to the USA and more capacity to the ASEAN countries as plan of the ASEAN Regional Information Exchange (ARIX) via optical fiber.**
- **MPTC should have the backbone (supper high way) for providing all data/voice with high speed and enough capacity.**
- **Additional Service such as VOIP will launch soon by MPTC/AZD of BCC.**
- **MPTC is studying the IP system version 6 to implement the Internet networking in Cambodia.**
- **For IT rural development, MPTC has the roll for set up the USO/USF development to get the ISP for expand its Internet network to the rural area in Cambodia.**

Thank You!