

Japan-Cambodia Joint Symposium on Information Systems and Communication Technology

6-8 January 2011, Phnom Penh Cambodia



Ministry of Posts and Telecommunications (MPT)

ICT Development in Cambodia Challenges – Strategies – Future

Chakrya Moa
Director General
Posts and Telecommunication
Ministry of Posts and Telecommunication



General Information





Telecom Sector Reform

Before 2006

**Policy
Development**

Regulator

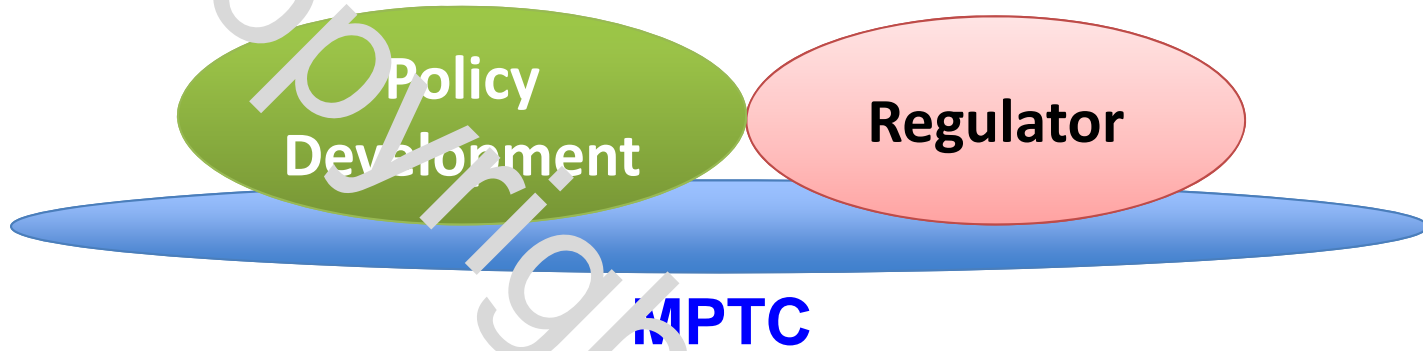
Operator

Ministry of Posts and Telecommunication (MPTC)





... Telecom Sector Reform





Telecom Service Indicator

■ Fixed Line Operators

- Telecom Cambodia
- Camintel
- Mfone (WLL)
- Viettel (Cambodia)

■ International Carriers

- 001 : Telecom Cambodia (T.C.)
- 007 : Royal Telecom International (R.T.I.)
- 009 : Viettel (Cambodia) (V.T.C.)

• Internet Service Providers (ISPs)

- **Internet Service Providers:** 37 companies (15 companies are in operation)
- **Voice over IP:** 29 companies (15 companies are in operation)

• Internet Café: **229**

- 118 in Phnom Penh
- 111 in Other provinces





Mobile Operators

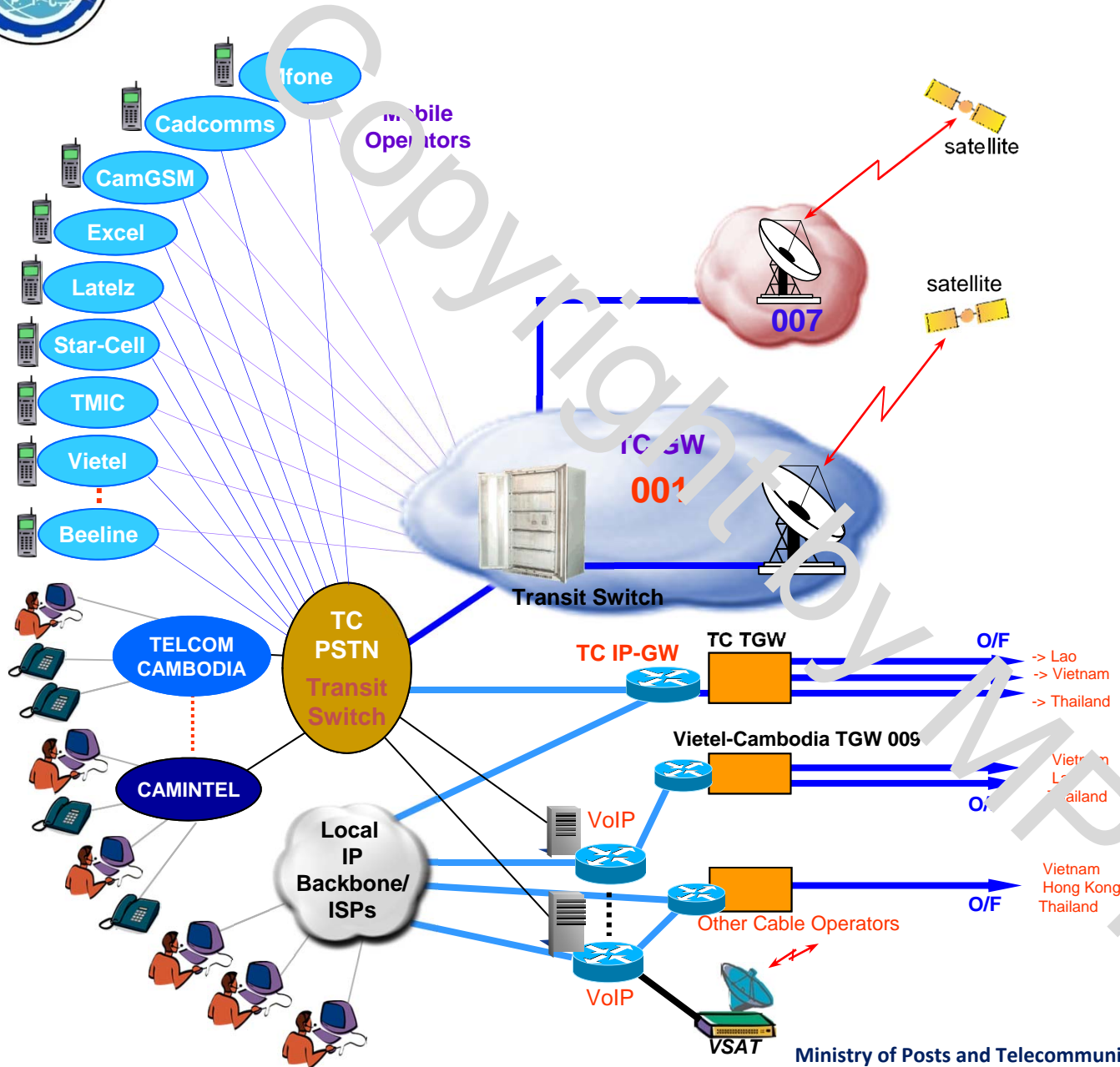
Mobile Phone System for all Operators

1. CamGSM : GSM900/1800MHz and 3G
2. MFone : EGSM900/GSM1800MHz/CDMA450MHz and 3G
3. CADCOMMS : 3G,
4. HELLO : GSM900/1800MHz and 3G
5. Applifone : GSM1800MHz and 3G
6. Viettel (Cambodia): GSM 900/1800MHz and 3G
7. GT-TELL : CDMA 800MHz
8. Latelz : GSM 1800MHz
9. Sotelco : EGSM 900 and GSM1800MHz
10. KTC : CDMA 800MHz (Not in operation yet)





TELECOMMUNICATION NETWORK IN CAMBODIA



- Mobile Operator Access Codes**
- MFONE: 085, 011, 099
 - CADCOMMS: 013
 - CAMGSM: 012, 017, 089, 092
 - CAMINTEL:
 - EXCEL: 018
 - LATELZ: 010, 093
 - STAR CELL: 086, 098
 - TMIC: 015, 016, 081
 - TC (Telecom Cambodia) :
 - VIETTEL (Cambodia): 097
 - Beeline (Sotelco): 090
- NOTES**
- TC TGW: TC Transmission Gateway
 - O/F: Optical Fiber
 - SNG HUB: Singapore Hub
 - IP: Internet Protocol
 - IP-GW: Internet Protocol Gateway
 - PSTN: Public Switched Telephone Network
 - VoIP: Voice over Internet Protocol
 - VSAT: Very Small Aperture Terminal



Mobile Phone Statistics



Penetration (2010): 50.62 %



Fixed Phone Subscriber Statistics

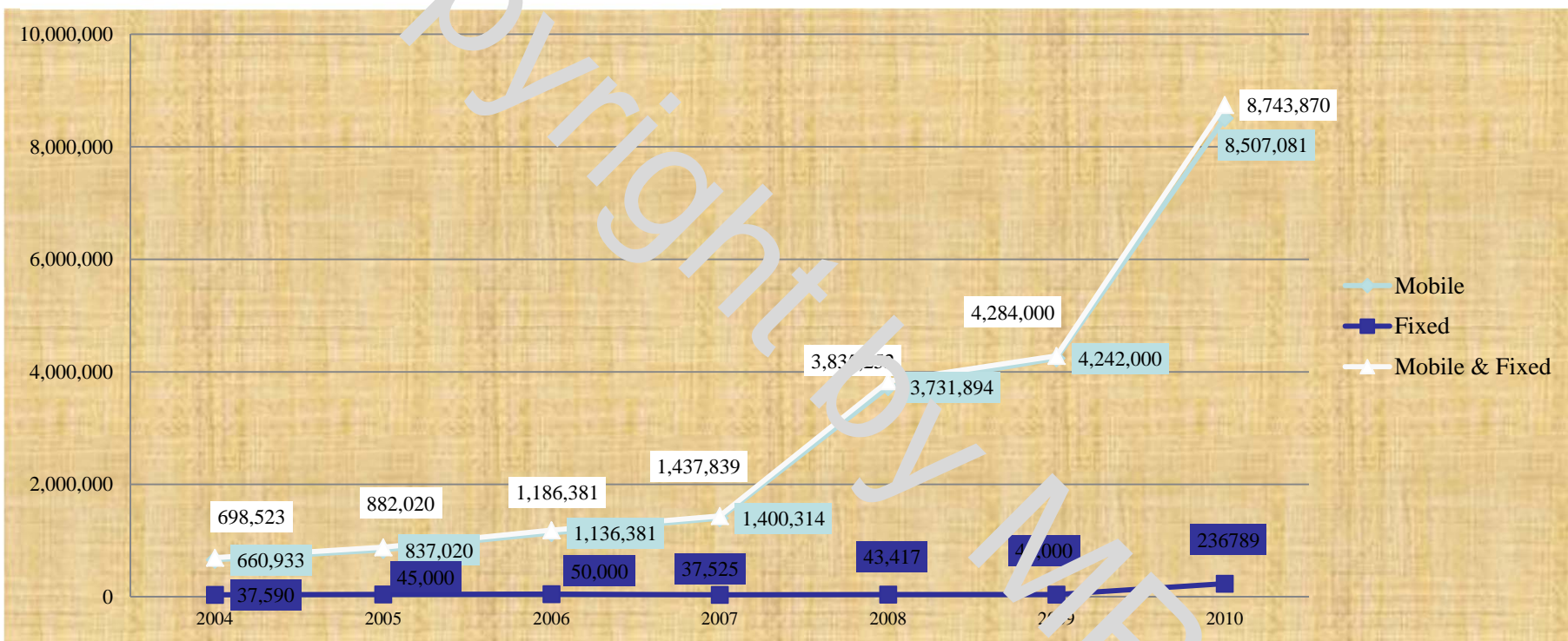


Penetration (2010): 1.71%



Telecom Statistic: Graphic

Telephone Subscriber Statistic

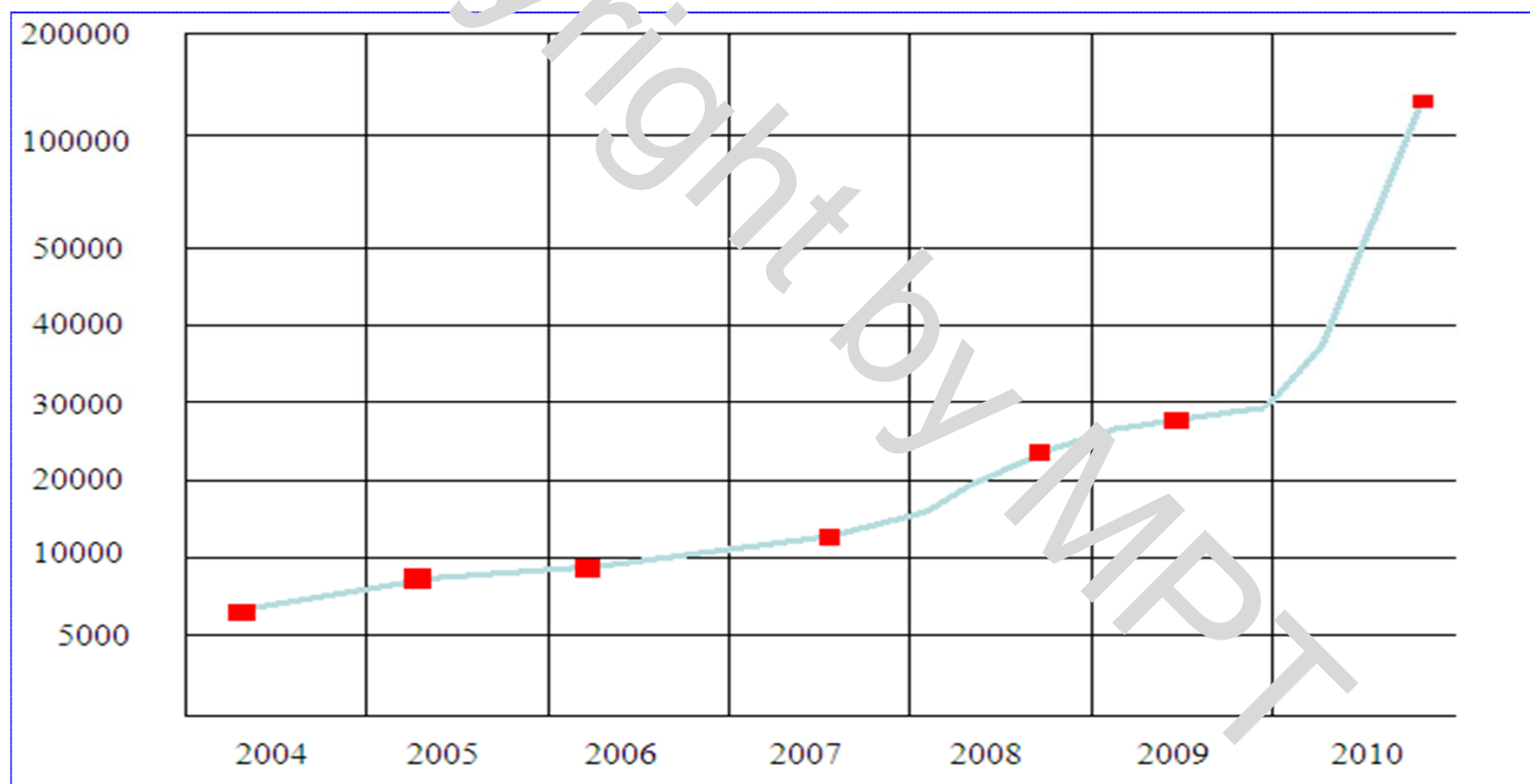


Year	2004	2005	2006	2007	2008	2009	2010
Mobile & Fixed	698,523	882,020	1,186,381	1,437,839	3,835,252	4,284,000	8,743,870



Internet Subscriber Statistic

ITEMS	2004	2005	2006	2007	2008	2009	2010
Subscribers	7671	8632	9089	10831	20402	29589	173675





KHNIC

- **KHNIC** will be implemented in near future to manage .KH domain and IP address
- IP Address Management is under progress to prepare the policy
- **Number of .KH domain: 636** (.com.kh, .gov.kh, .edu.kh, .org.kh, .net.kh, .per.kh and .mil.kh)

www.khnic.net.kh



National Optical Fiber Backbone





National & International Fiber Optical Network

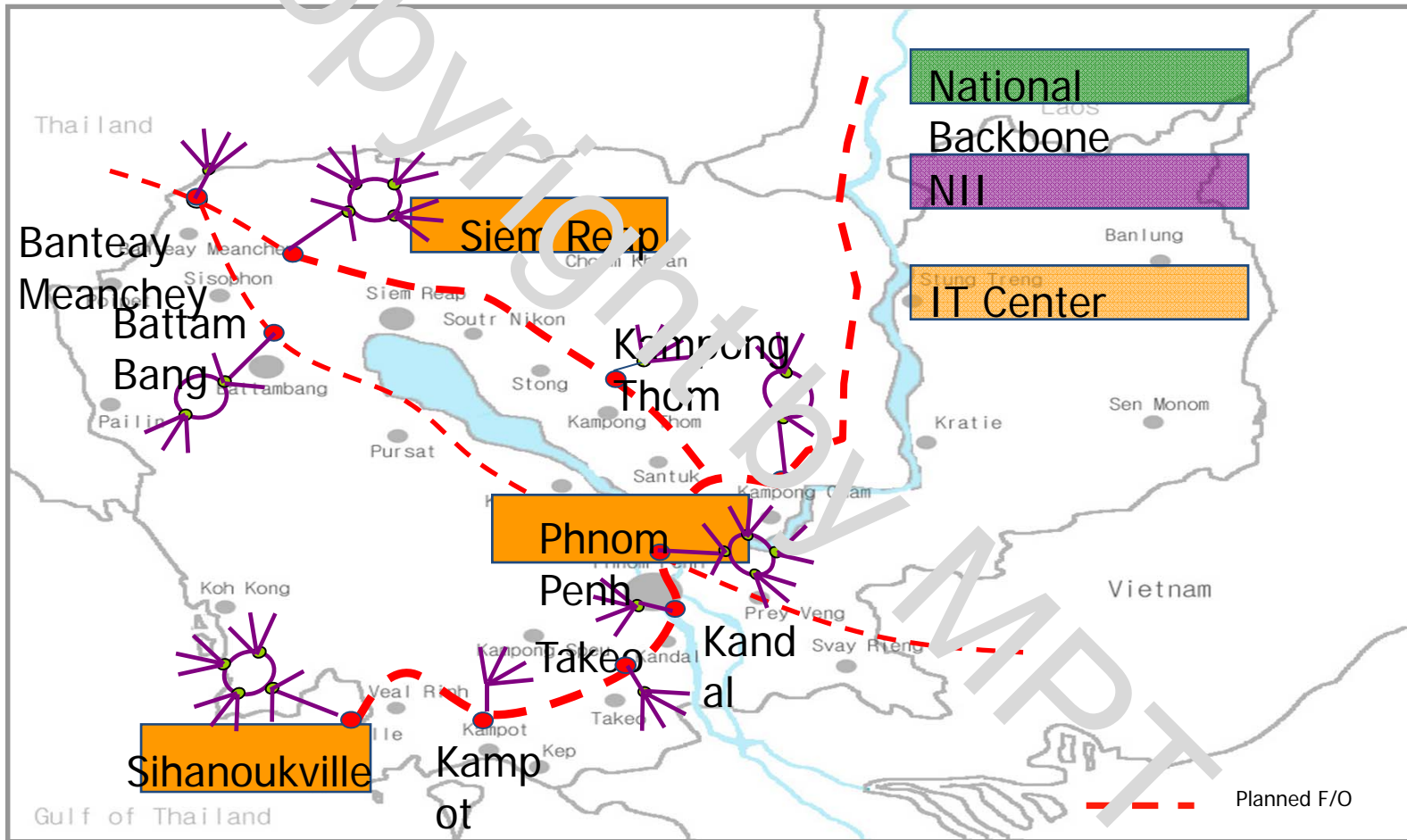
Fiber Optical Backbone Operators

- Telecom Cambodia (TC) : 1,200 Km
- CFOCN (Cambodia Fiber Optic Cable Network): 4,100 Km
- Viettel Cambodia : 15,000 Km
- Total national backbone: 20,300Km



E-Government Network by (NiDA)

In Phnom Penh City and 10 provinces



www.nida.gov.kh

Khema_van@nida.gov.kh



Telecommunication/IT Services Strategies and Future

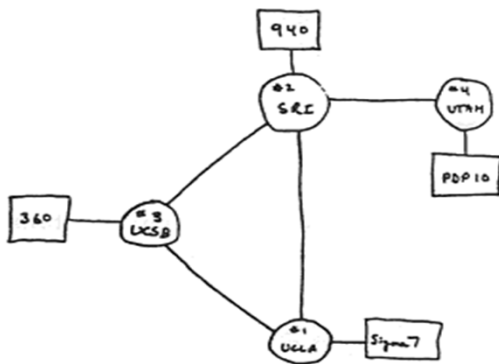
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The Internet

THEN

NOW

In 1969 there are only
4 HOST COMPUTERS



THE ARPA NETWORK

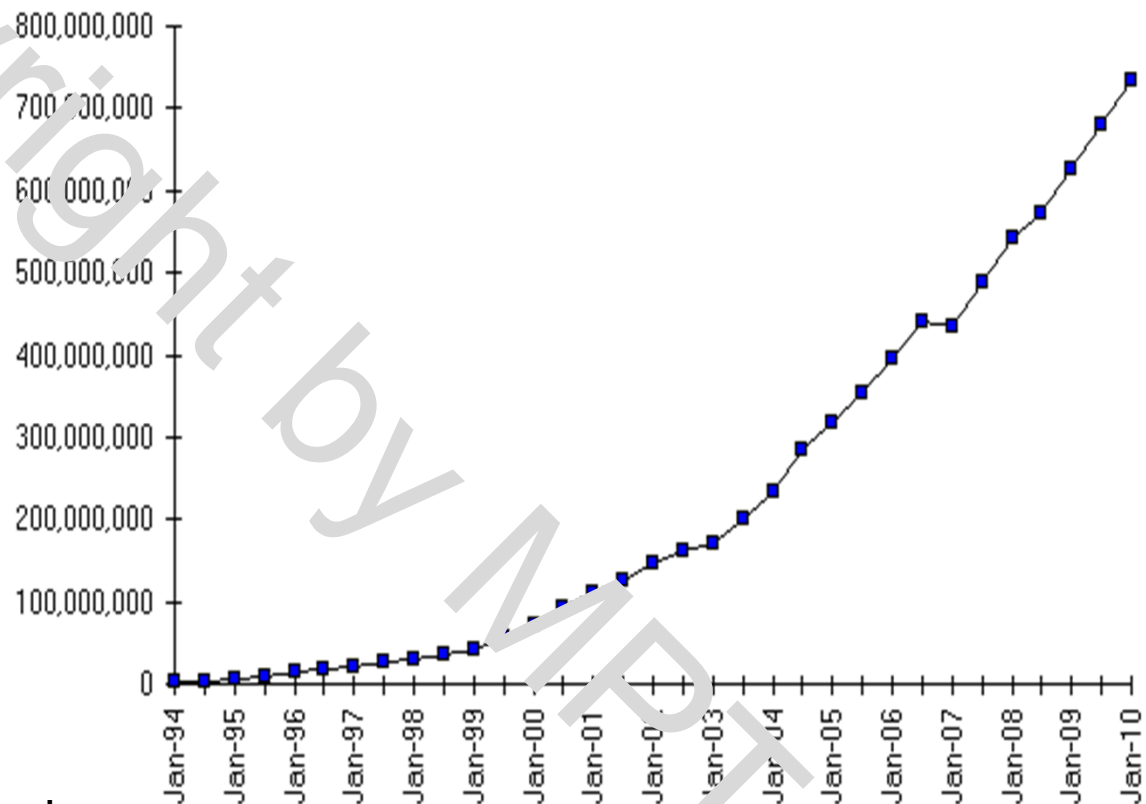
DEC 1969

4 NODES

FIGURE 6.2 Drawing of 4 Node Network
(Courtesy of Alex McKenzie)

First 4 hosts: University of California Los Angeles
(UCLA) University of California Santa Barbara
(UCSB) University of Utah Stanford Research Institute (SRI)

Internet Domain Survey Host Count

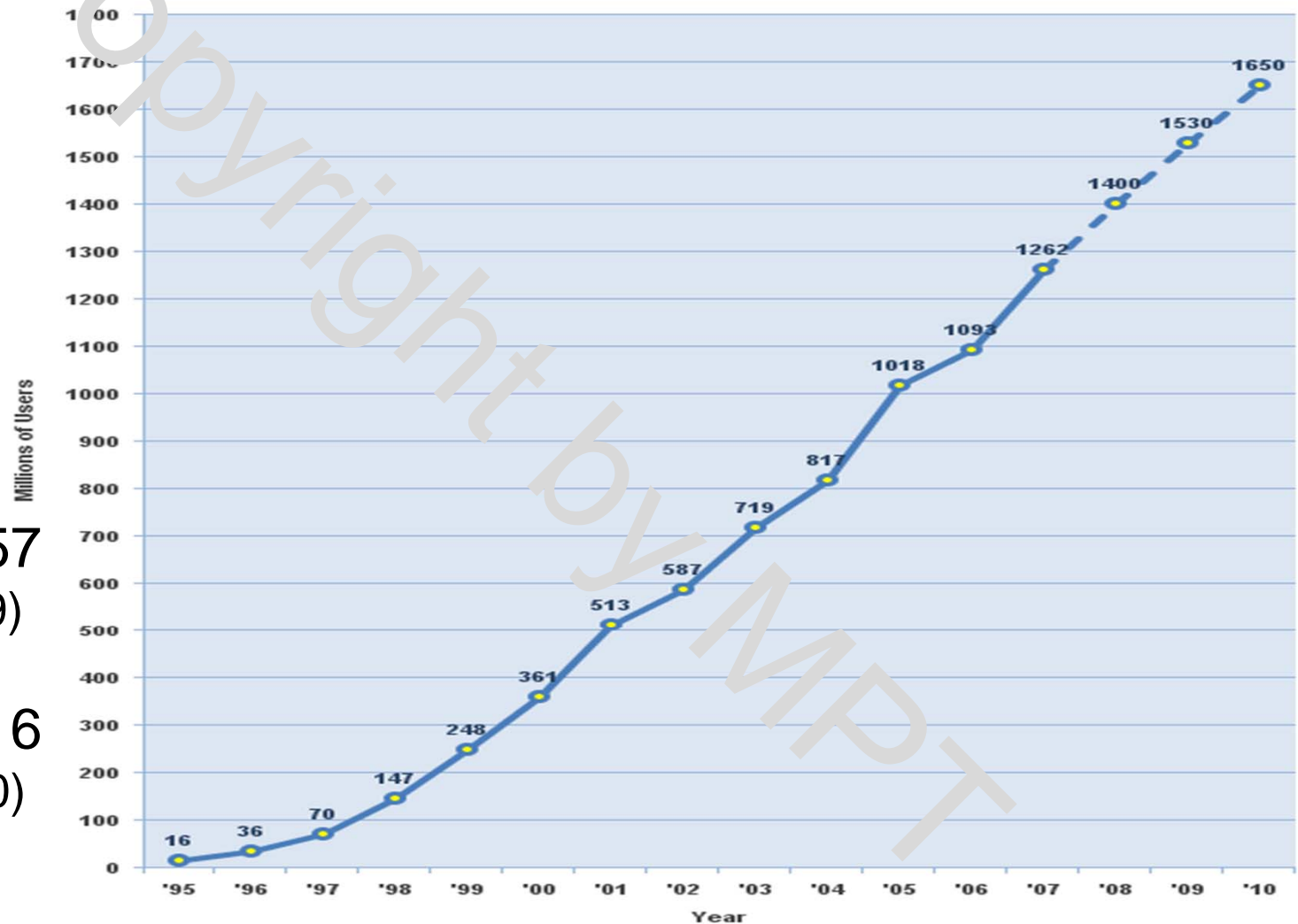


Source: Internet Systems Consortium (www.isc.org)



World Internet User Statistic

Internet Users in the World
Growth 1995 - 2010



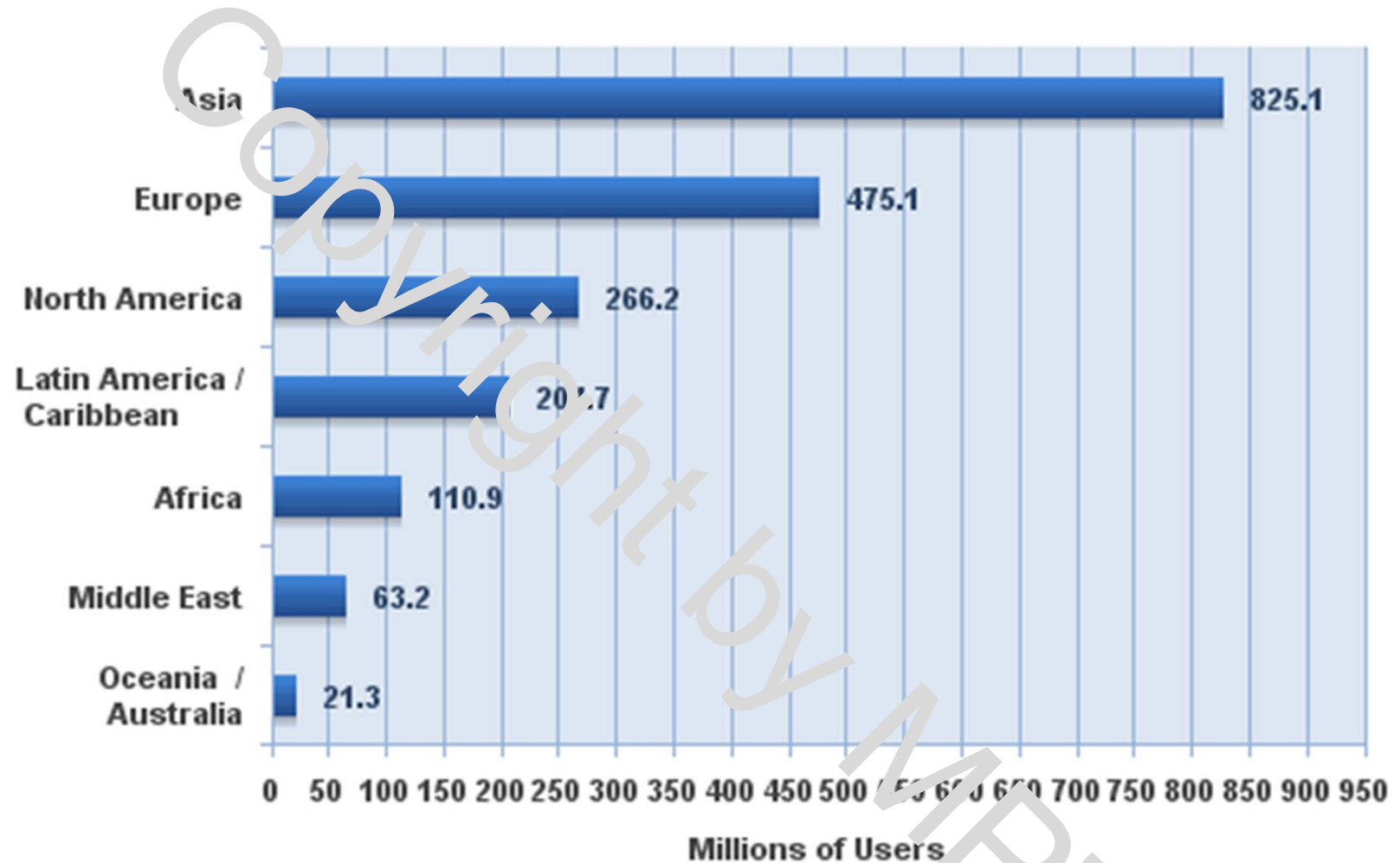
1,802,330,457
(Dec, 31, 2009)

1,966,514,816
(June 30, 2010)

Source: www.internetworldstats.com - January, 2008
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Internet Users by Region 2010



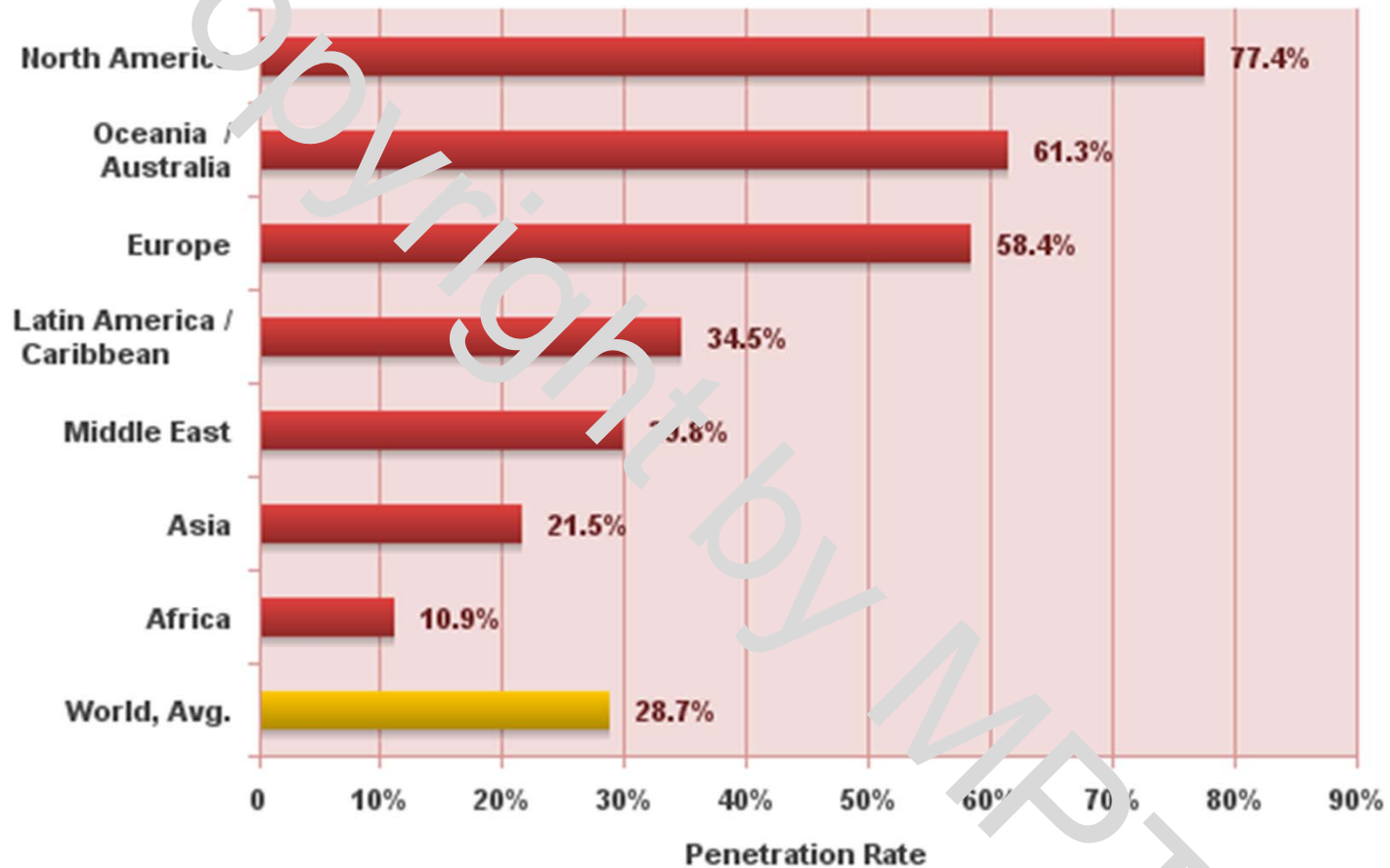
Source: Internet World Stats - www.internetworldstats.com/stats.htm

Estimated Internet users are 1,966,514,816 on June 31, 2010

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Penetration by Region 2010



Source: Internet World Stats - www.internetworldstats.com/stats.htm
Penetration Rates are based on a world population of 6,845,609,960 and 1,966,514,816 estimated Internet users on June 30, 2010.
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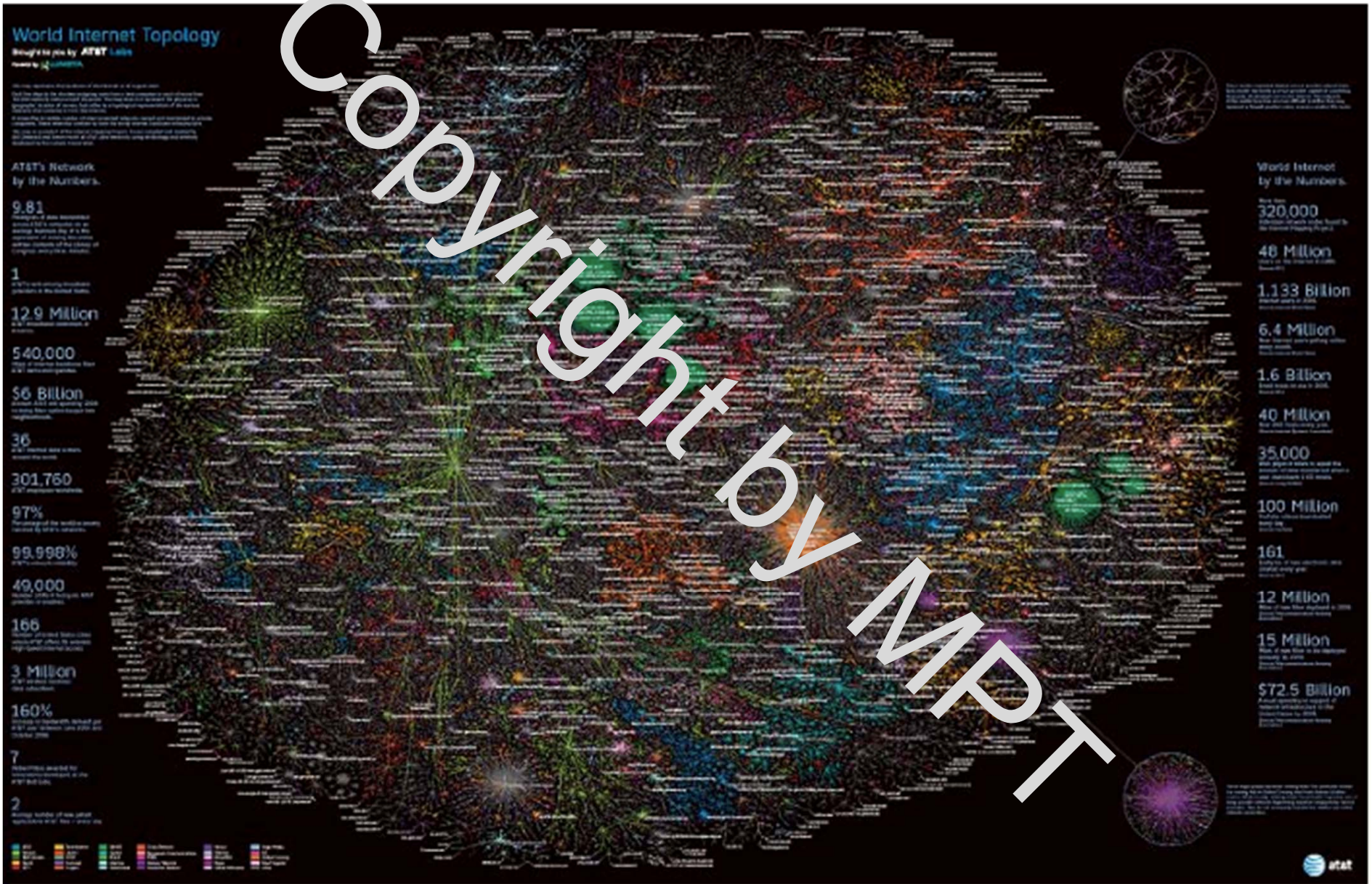


Country Specific Statistics

	Population (2010 Est.)	Usage (Year 2000)	Internet Usage (Latest Data)	% Population (Penetration)	User Growth (2000-2010)	% of Region
Afghanistan	29,121,236	1000	1,000,000	3.4%	99,900%	0.1%
Bangladesh	158,065,841	100,000	617,300	0.4%	517%	0.1%
Brazil	201,103,330	5,351,300	75,943,600	37.8%	1419%	37.9%
Cambodia	14,753,320	6,000	78,000	0.5%	1200%	0.0%
Ghana	24,339,838	30,000	1,037,000	5.3%	4223%	1.2%
Iraq	29,671,605	12,500	305,000	1.1%	2500%	0.5%
Lesotho	1,919,552	4,000	73,800	4.0%	1820%	0.1%
Liberia	3,685,076	500	20,000	0.5%	3900%	0.0%
Nepal	28,951,852	50,000	625,800	2.2%	1152%	0.1%
Pakistan	177,276,594	133,900	18,500,000	10.4%	13716%	2.2%
Rwanda	11,055,976	5,000	450,000	4.1%	8900%	0.4%
Zambia	12,056,923	20,000	816,700	6.8%	3984%	0.7%

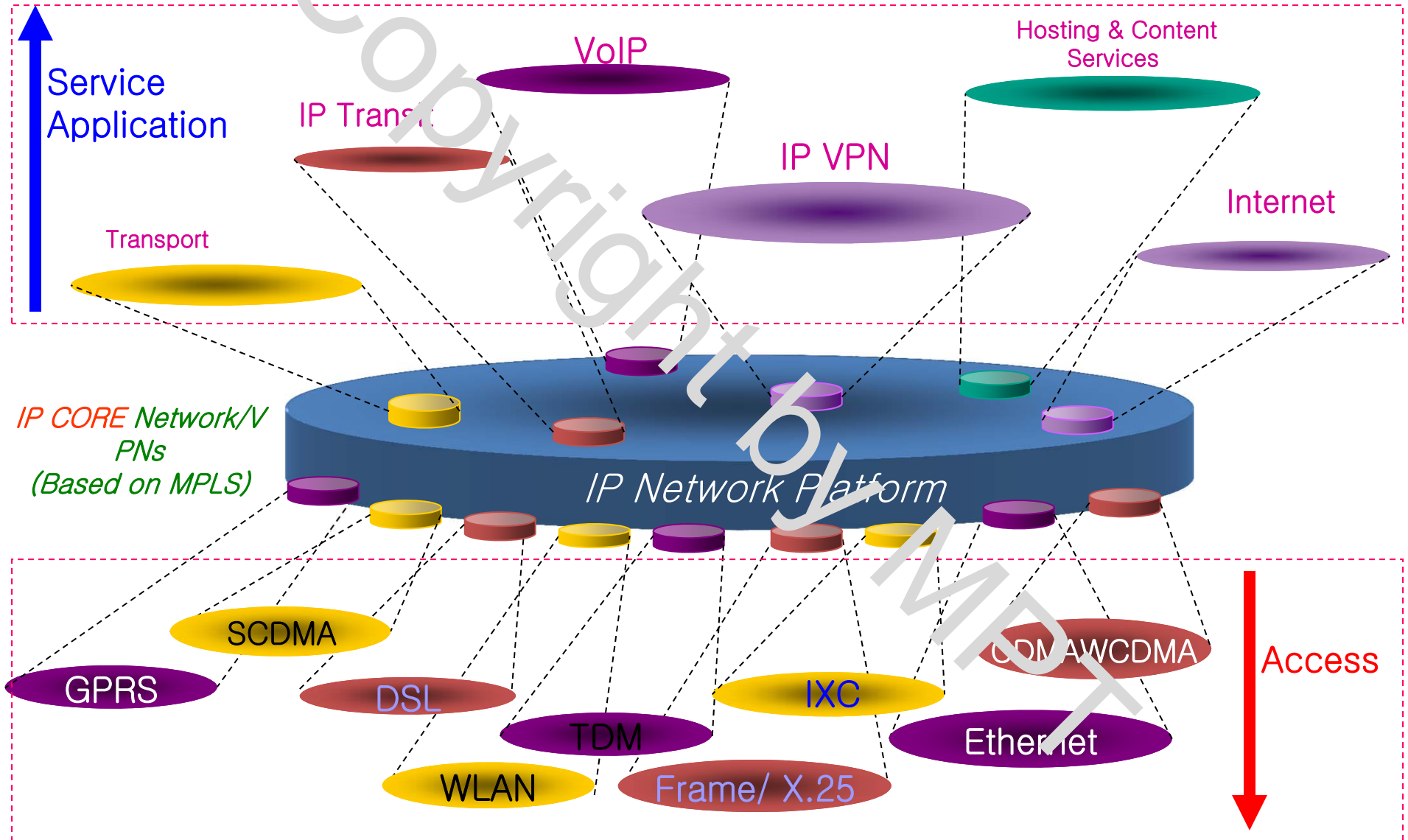


The Internet



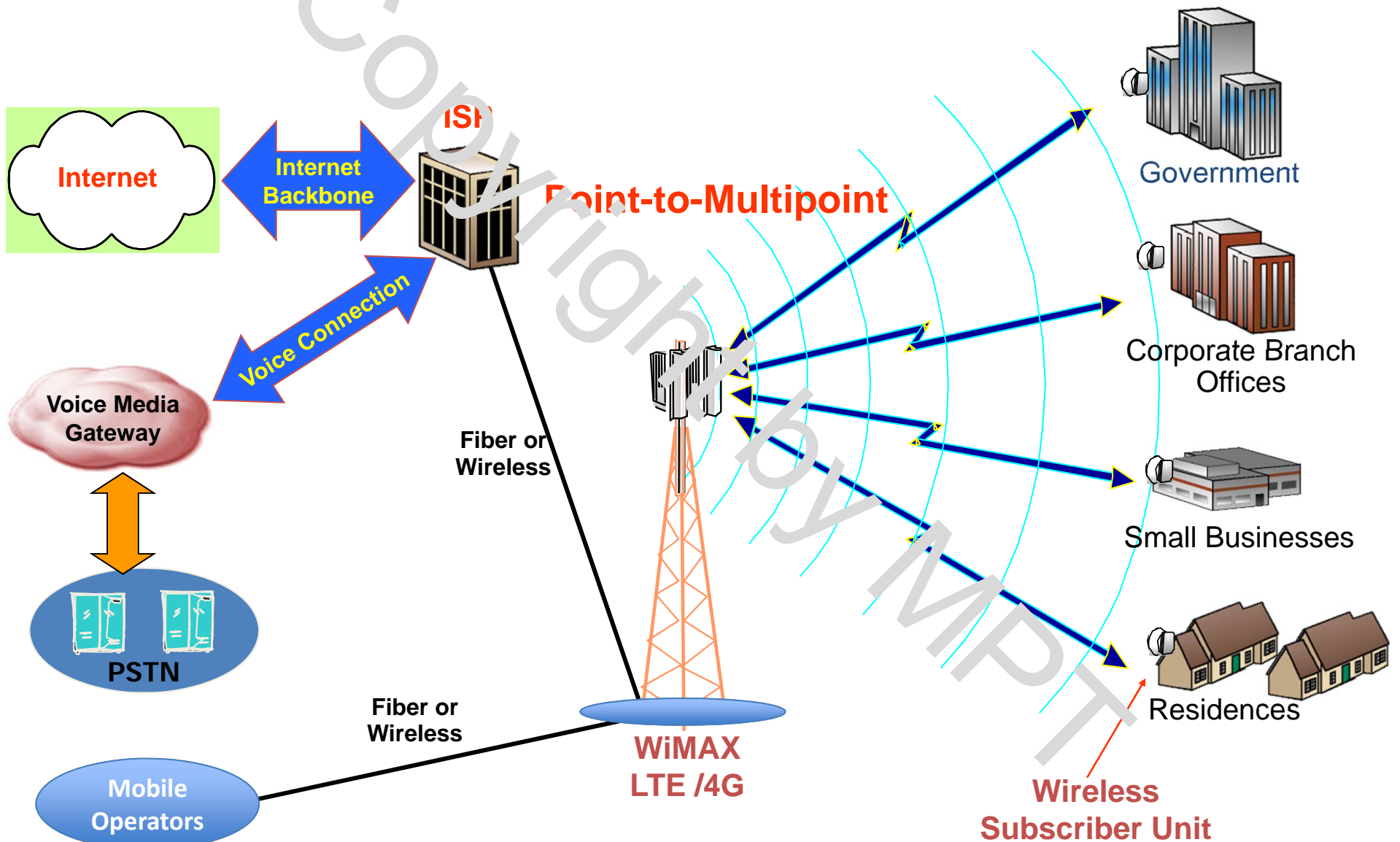


Future of IP Strategy for Telecom Services





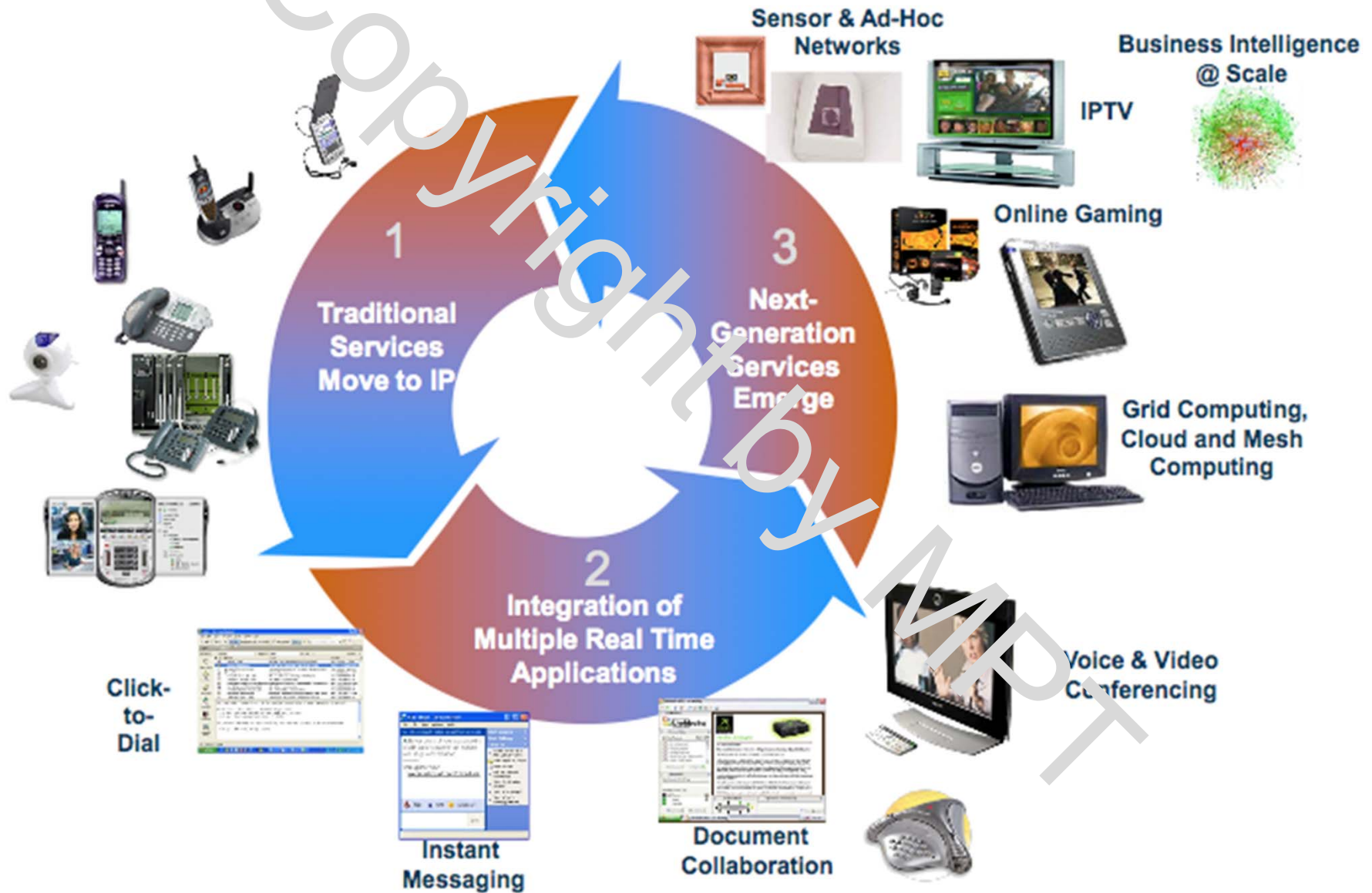
Wireless Broadband



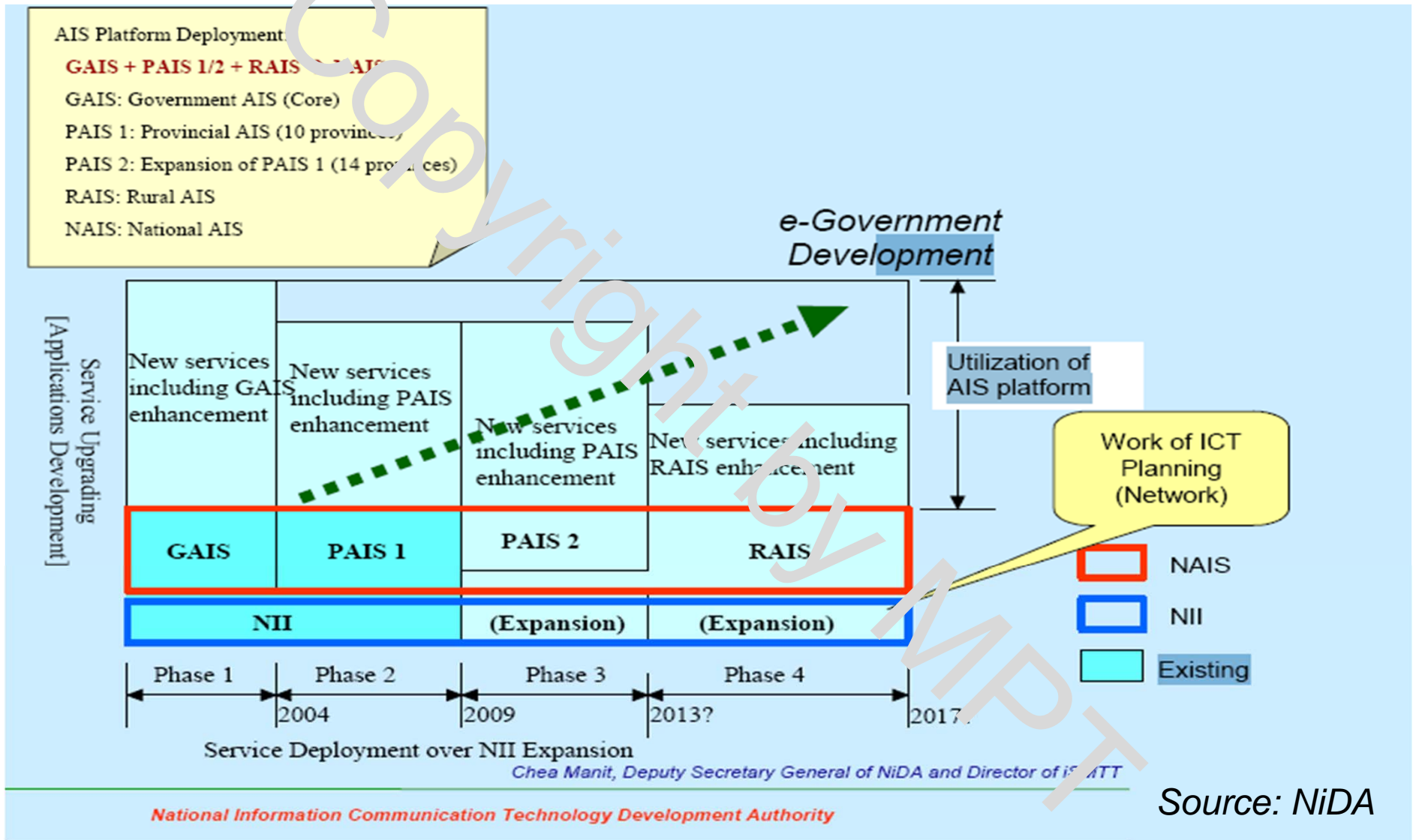


Contents and Applications

Integrated Services over IP

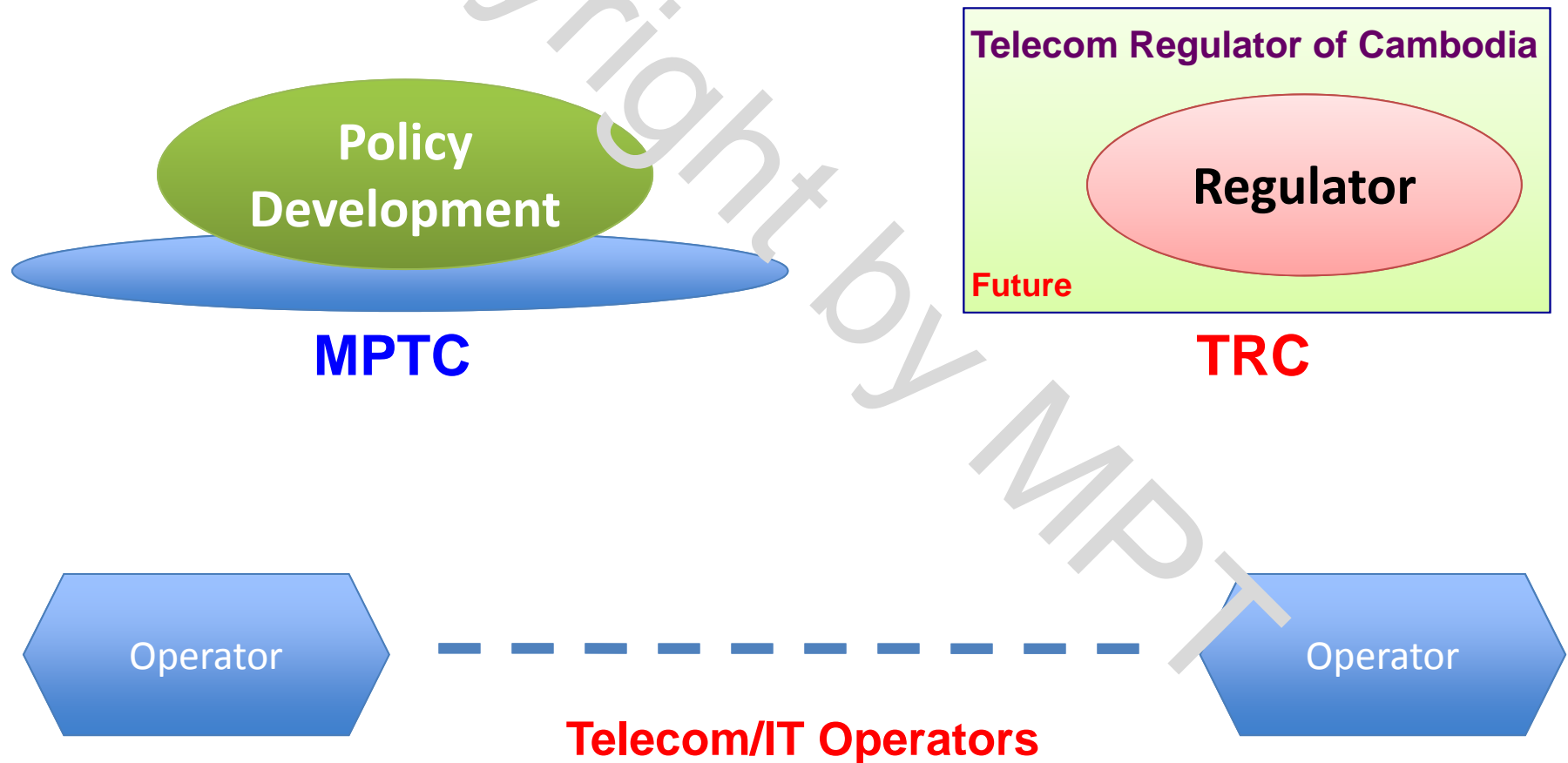


e-Government Project Phases



Where we are now?

What we can do next ?





Legislations

- Telecom Law (in Draft)
- Radio Communication Law
- Others Laws and Prakas





Internet Governance

- Internet Management
- Securities issues
- Contents Development
- Infrastructure Improvement



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Thank You!