

DIGITAL DIVIDE IN THE PHILIPPINES

A. Bacala, W. Dimamay, D. Dinawanao

Mindanao State University-Iligan City, Philippines

D. Villoriente, J. Tetangco

Advanced Science & Technology Institute (ASTI),

Department of Science & Technology

Philippines

The Philippines

Area: 300,000 sq km.

7,107 Islands; 2nd largest archipelago
in the world

3 Major Island Groups : Luzon
Visayas
Mindanao

16 Regions

78 Provinces

96 Cities

1,513 Municipalities

41,943 Barangays

Capital: Manila

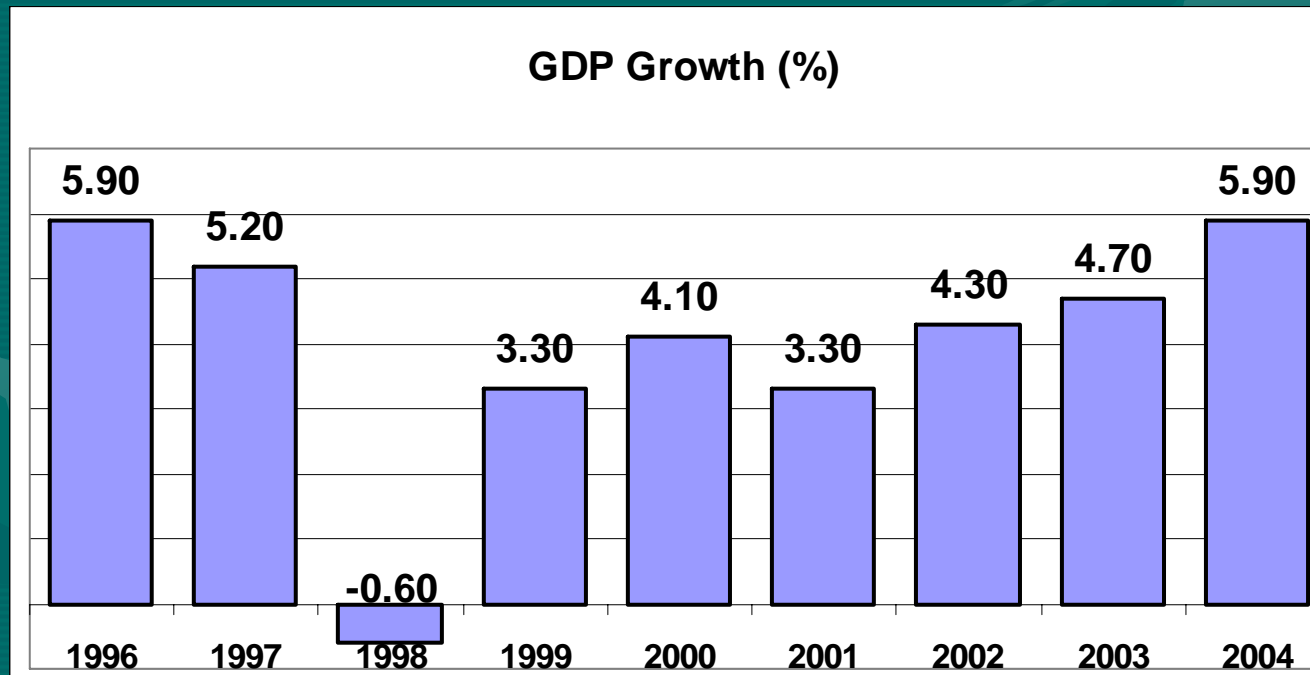


Philippine Profile

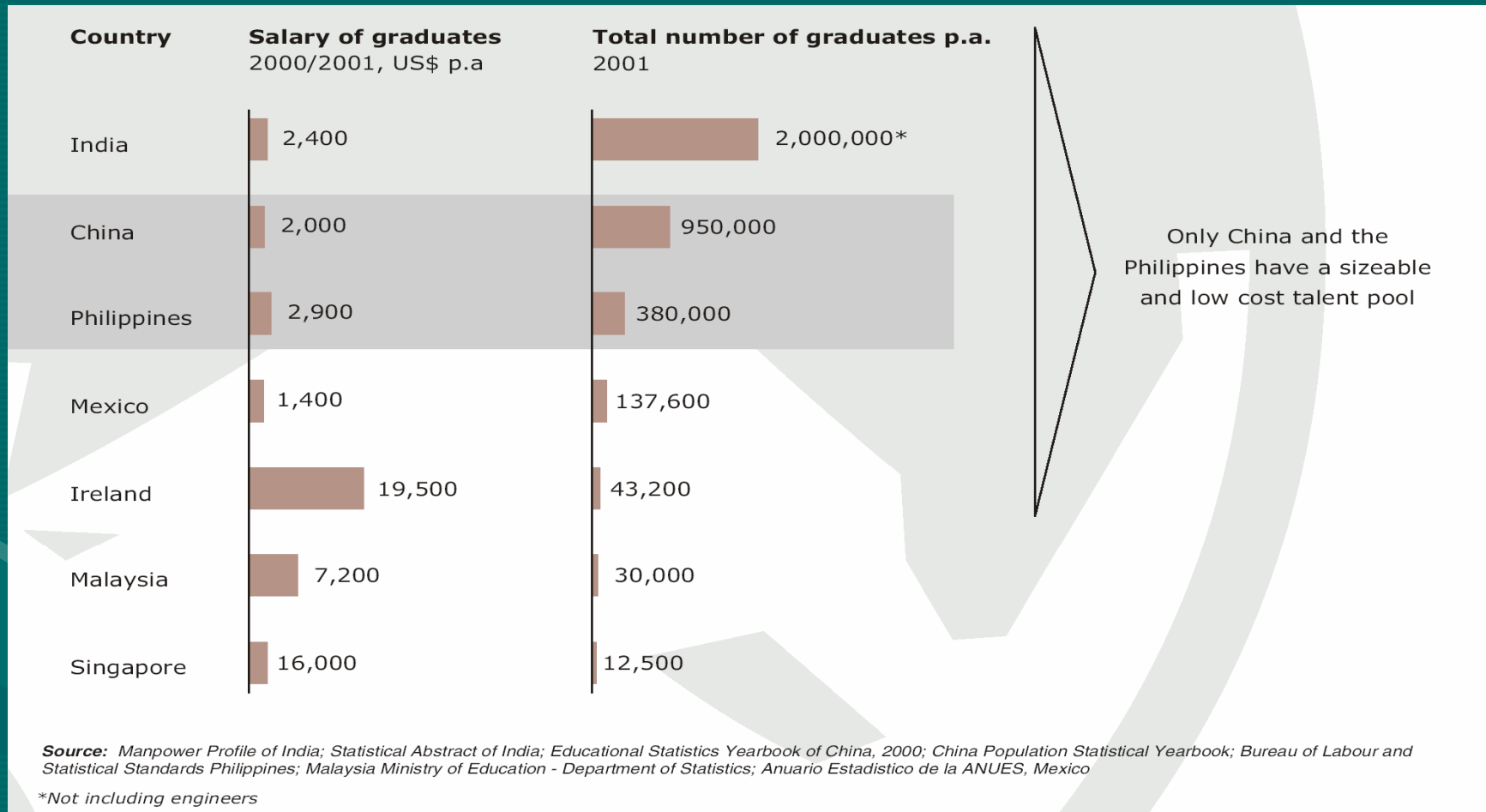
- 82 M population (2003); 2.3% annual growth rate
- Predominantly young (71% < 35 yrs old)
- 95% Malayan descent
- 84% Catholics; 10% Protestants; 5% Muslims
- 95.1% adult literacy
- 73% English literacy
- 2.4 M enrolled in higher education
- 400,000 college graduates annually

Philippine Profile

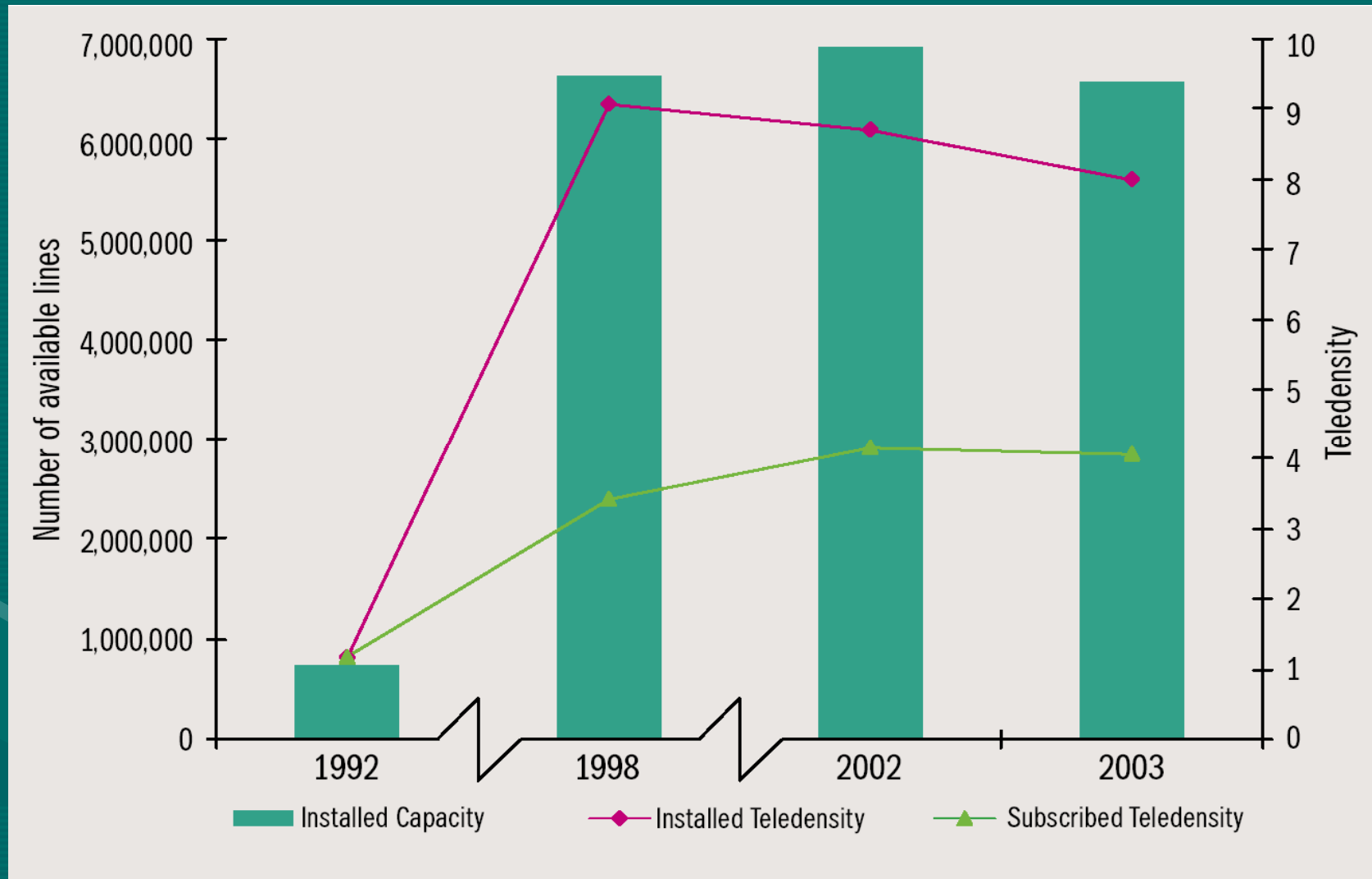
- Per Capita GNP: \$1080
- GDP (2003): \$80.6 B
- PhP 54.98 = US\$1
- <25% poverty incidence
- Ranks 70th out of 160 countries in UNDP's HDI Report 2001



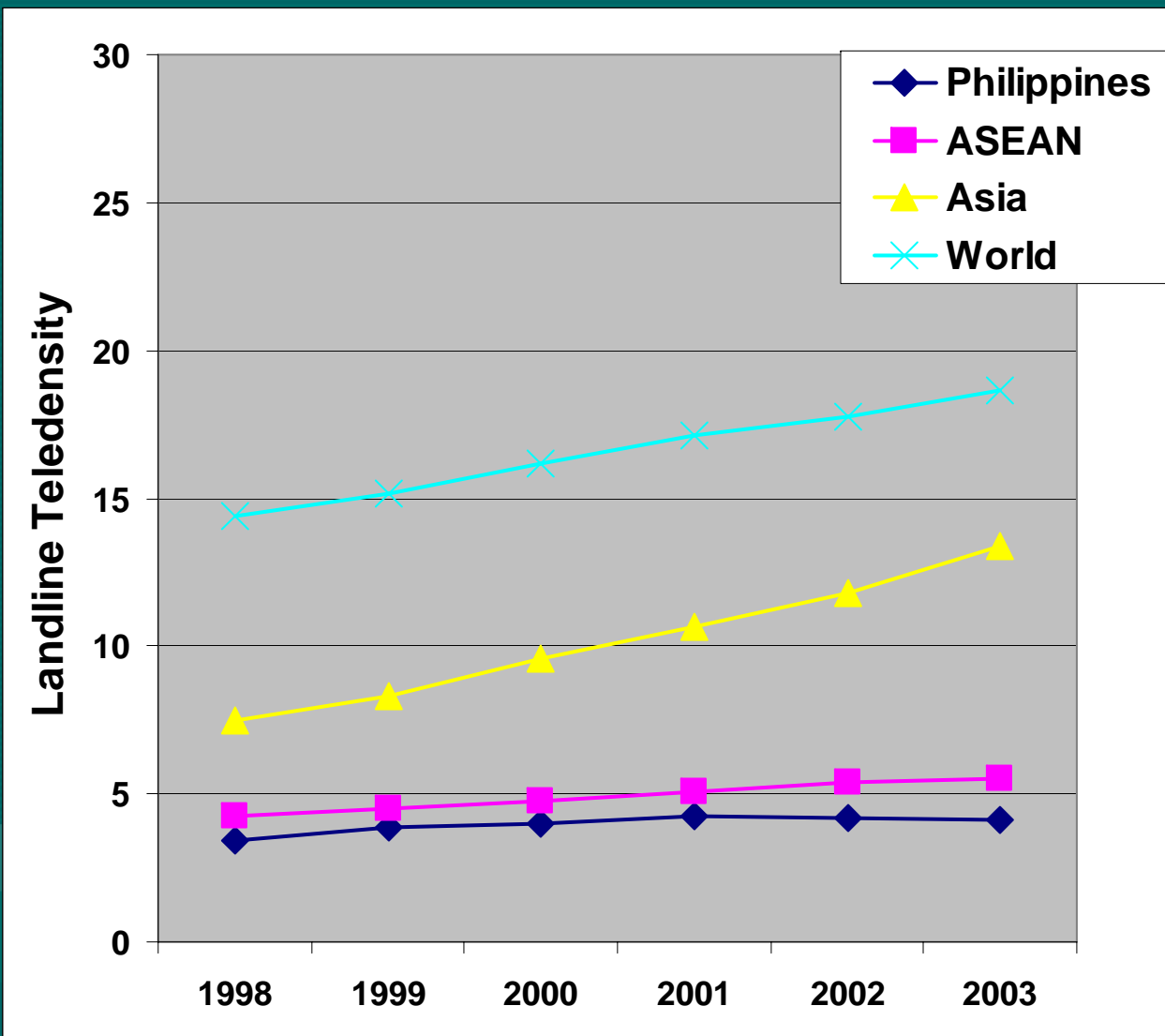
Philippines' talent pool



Number of Installed Lines and Teledensity (1992-2003)

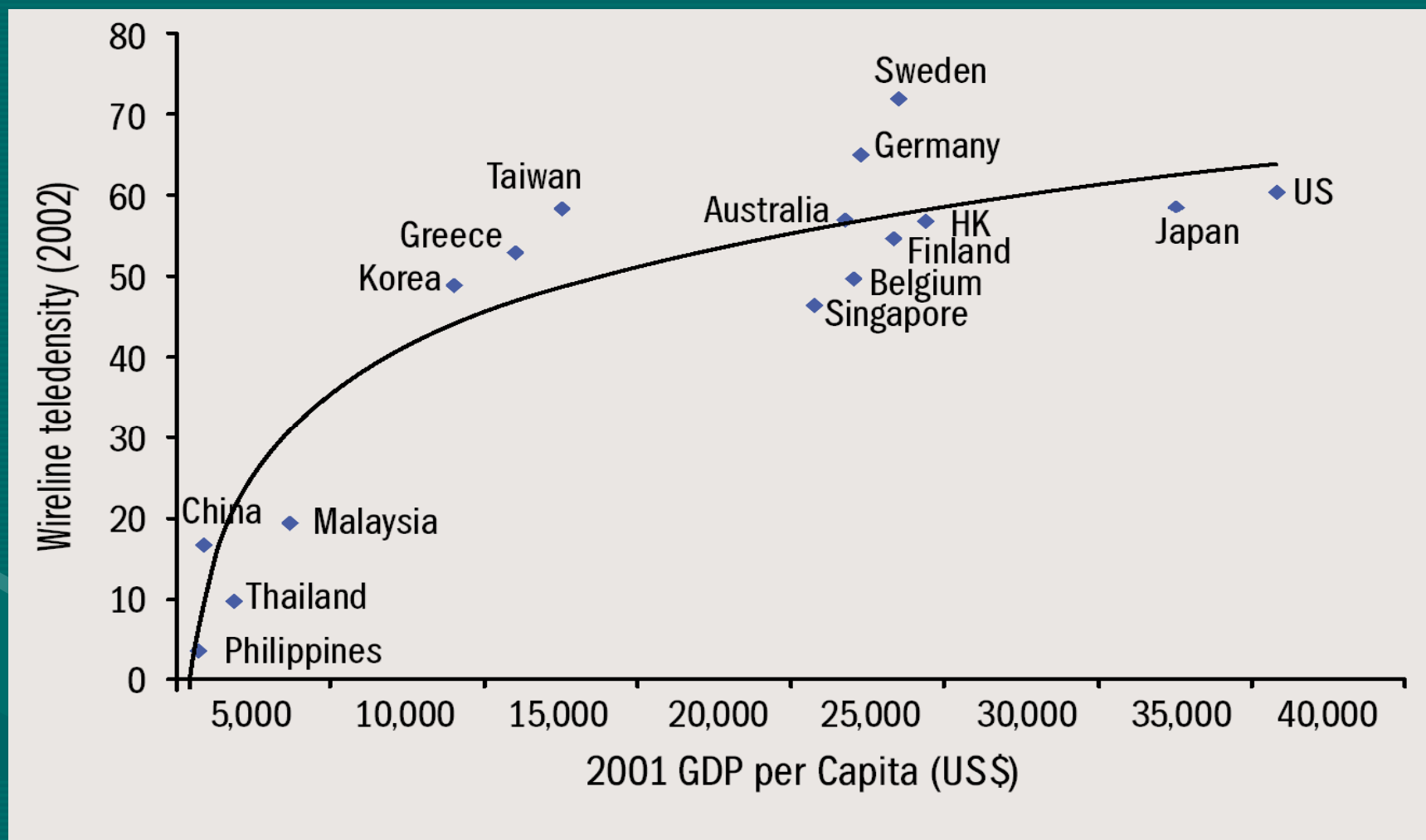


Source: NTC, ITU, [2]



Source: ITU 2002,2005

GDP per Capita vs. Wireline Teledensity



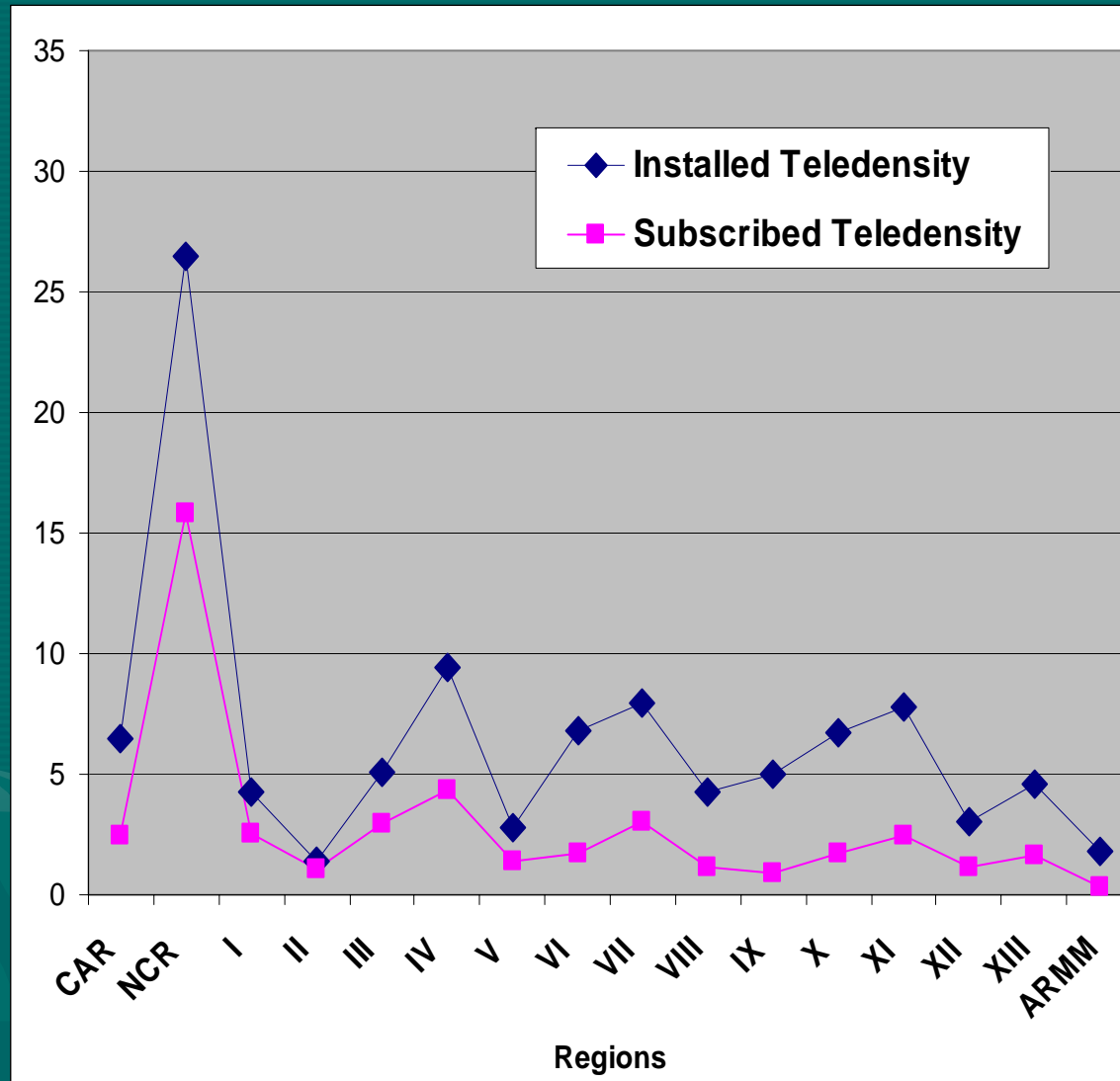
Source: ITU 2003, [2]

2002 Regional Landline Teledensity

CAR	6.44	2.43
NCR	26.47	15.79
I	4.26	2.54
II	1.36	1.05
III	5.09	2.96
IV	9.4	4.32
V	2.75	1.36
VI	6.78	1.71
VII	7.96	3.01
VIII	4.23	1.11
IX	5.03	0.9
X	6.69	1.73
XI	7.81	2.42
XII	3.04	1.18
XIII	4.63	1.66
ARMM	1.8	0.35

Average 8.7 4.17

Regional Divide

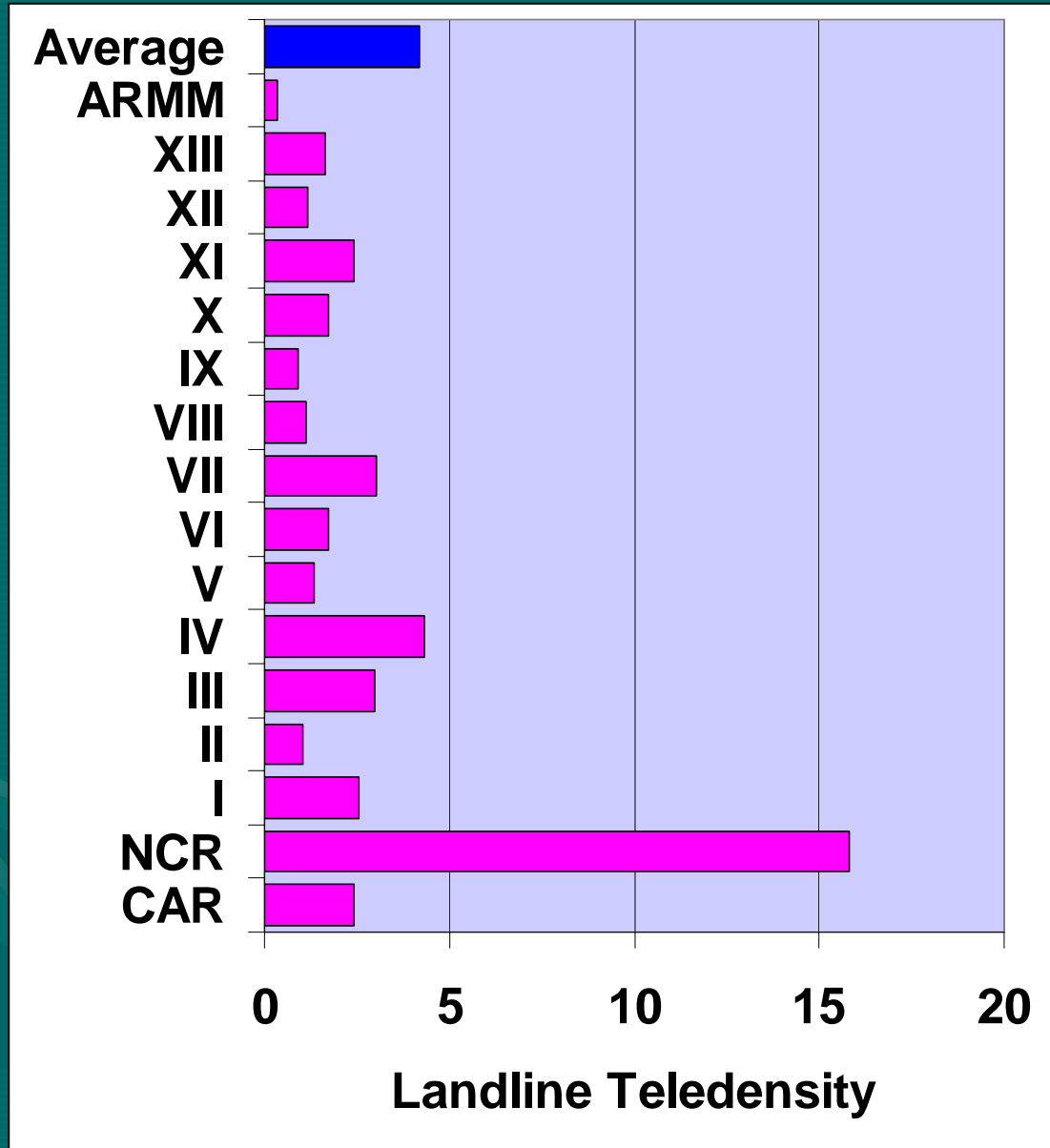


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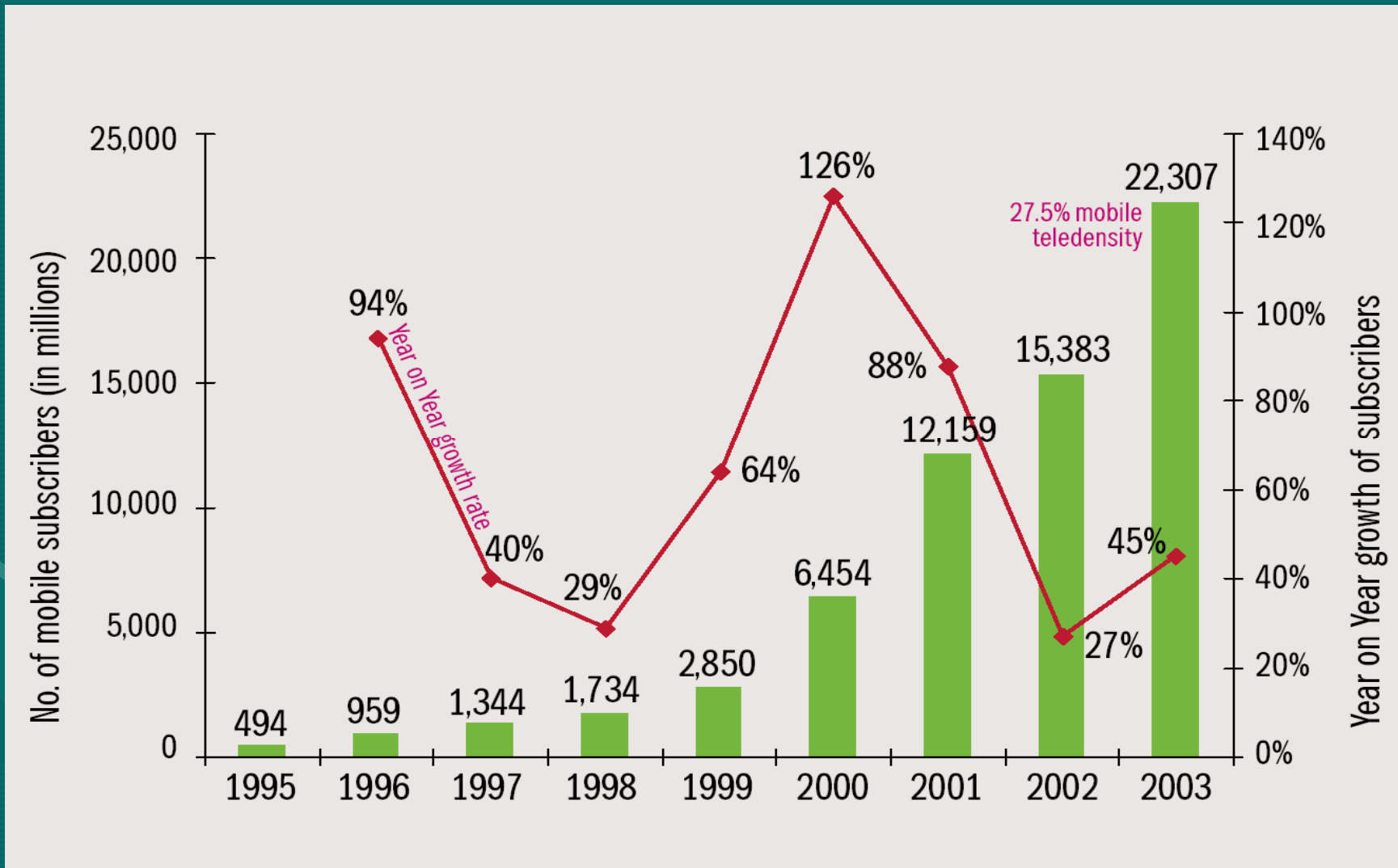
Liberalized Telecommunications

- Before 1989: one major telco.; several local exchange carriers

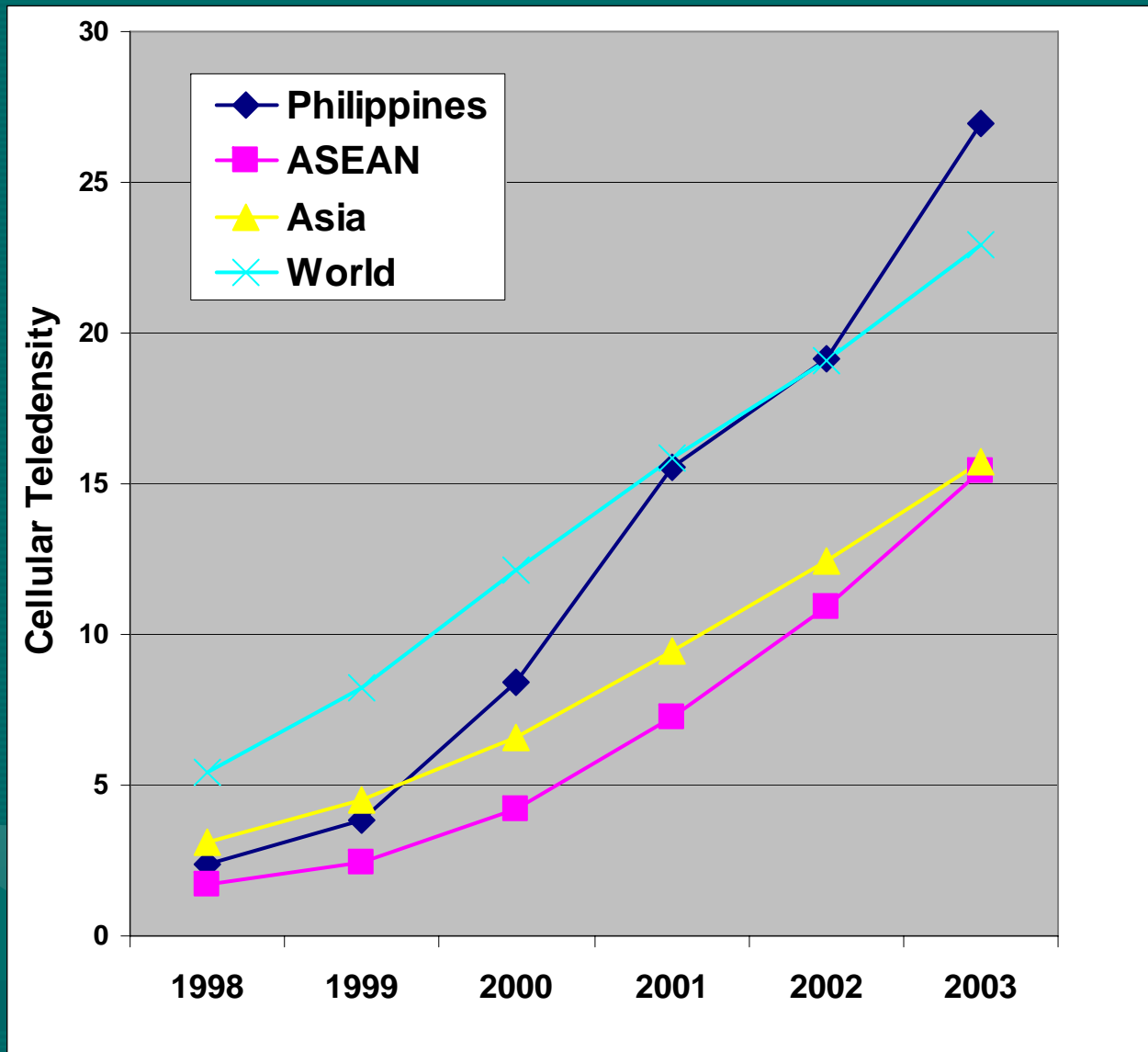
End of 2000

- 77 Local Exchange Carriers (LECs)
- 11 International Gateway Facilities (IGF)
- 5 Cellular Mobile Telephone Systems (CMTS)
- 15 paging companies
- 11 international and domestic record carriers
- 8 satellite VSAT operators
- 156 Value Added Service (VAS) providers, including ISPs.

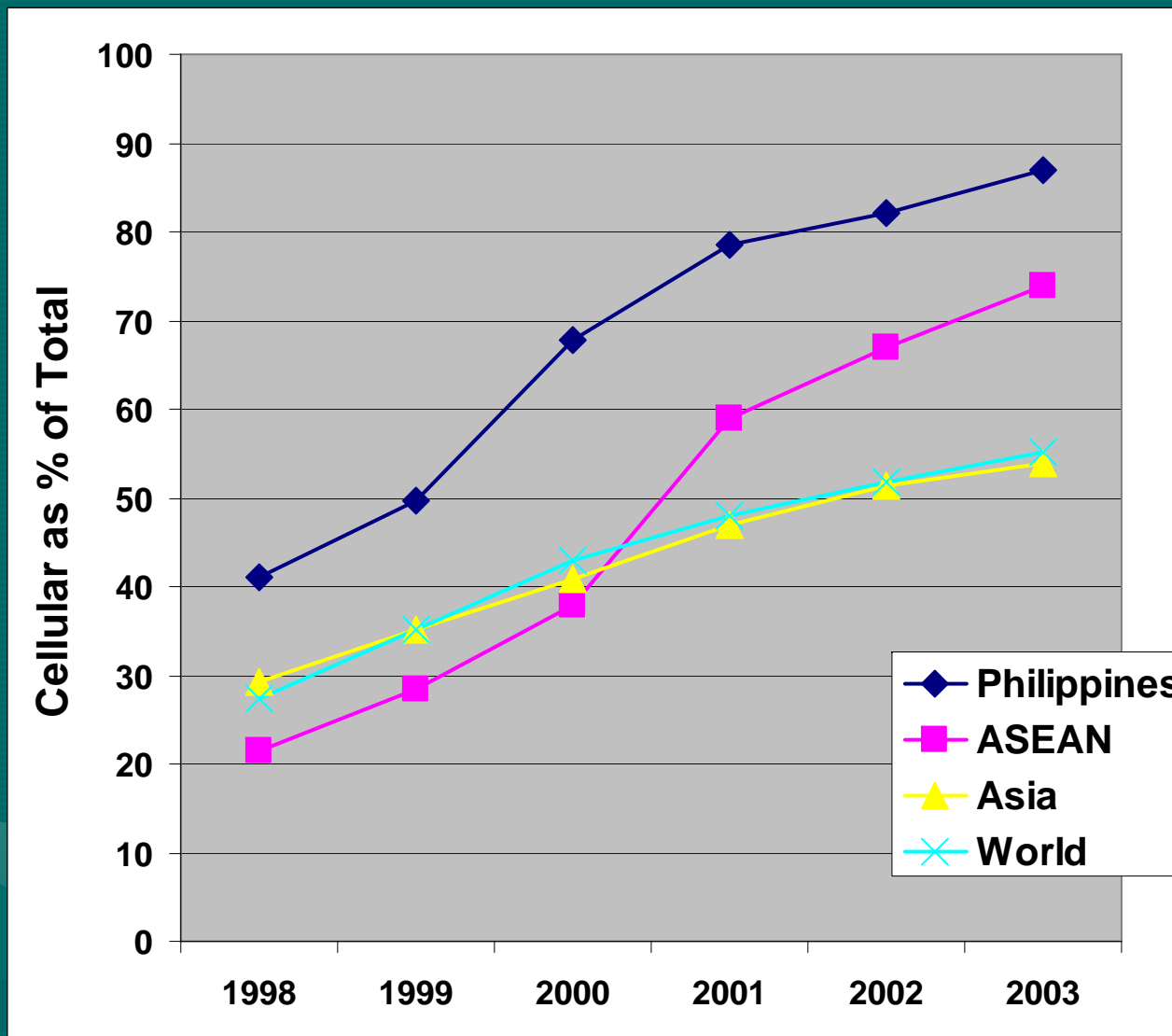
Growth of Mobile Subscribers (1995-2003)



Source: NTC, ITU, [2]

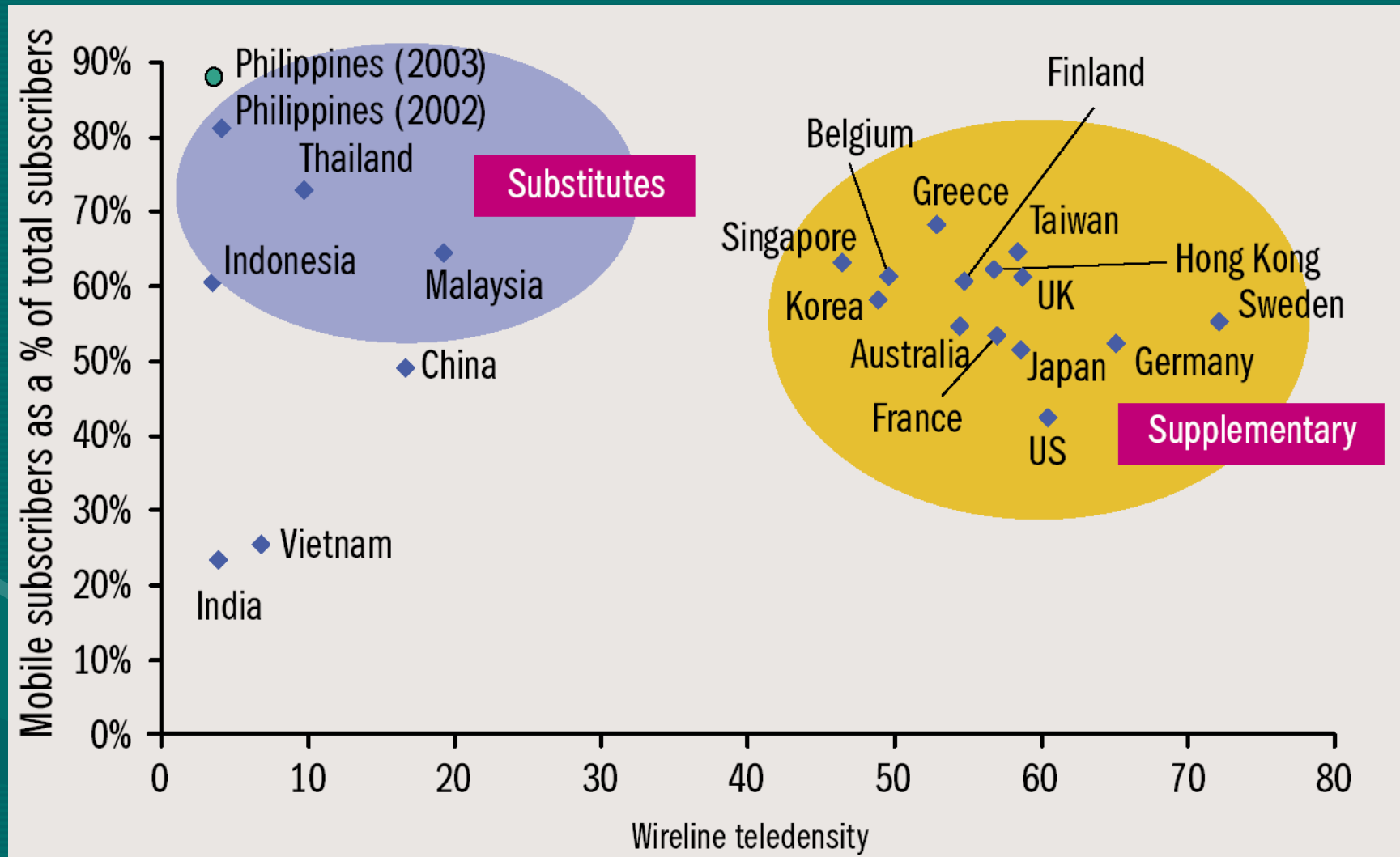


Source: ITU 2002,2005



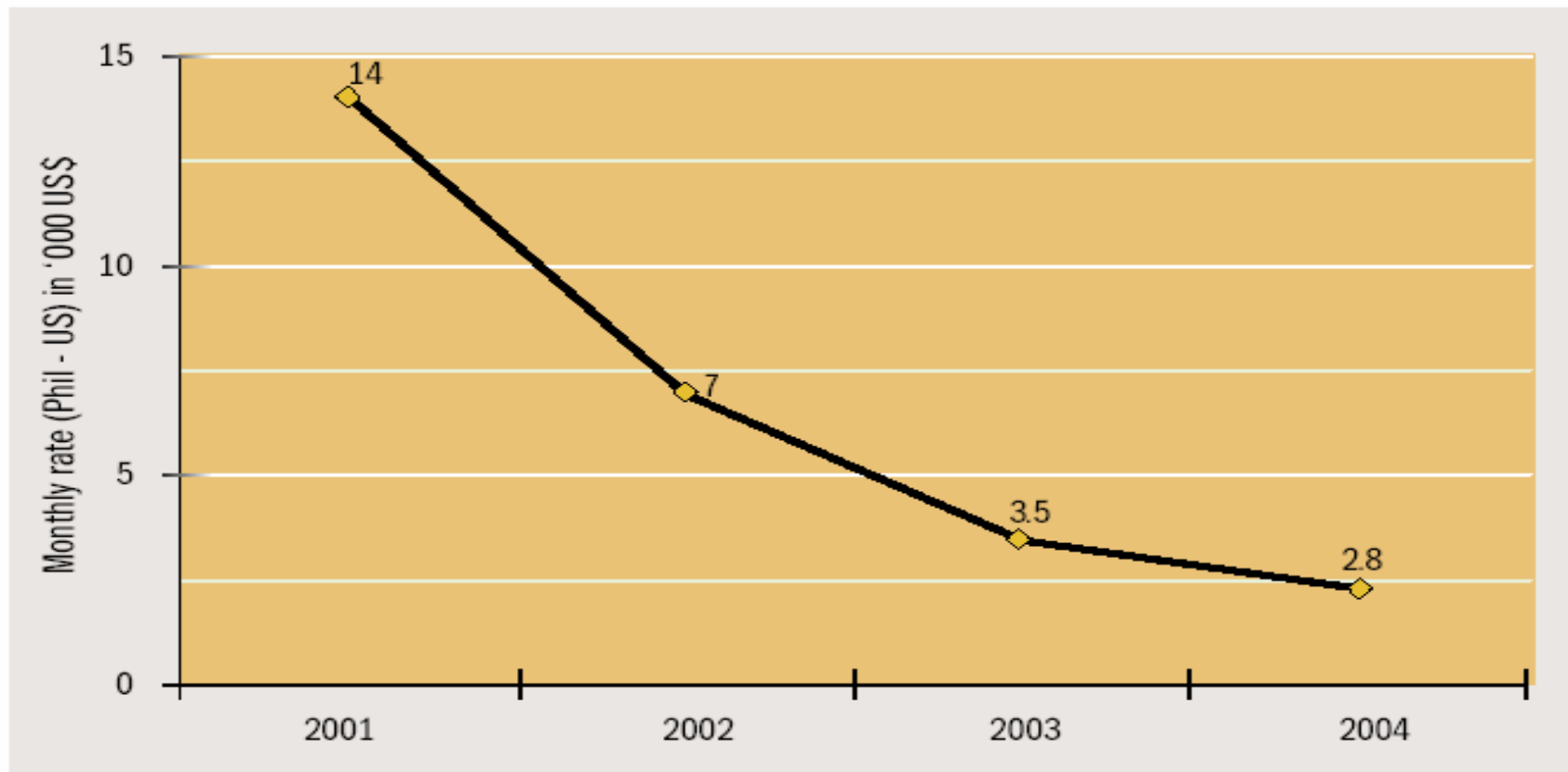
Source: ITU 2002,2005

Weight of Mobile in Relation to Teledensity (2002)



Source: ITU 2003, [2]

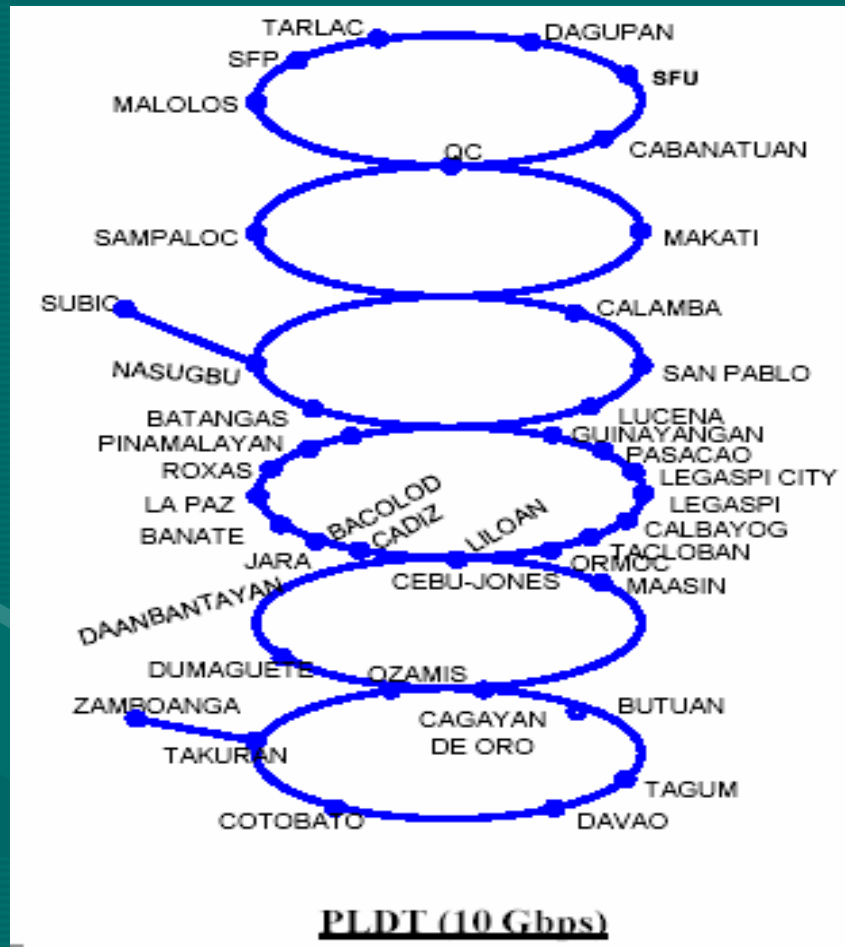
Philippine E-1-2 Mbps Bandwidth Rates (2001-2004)



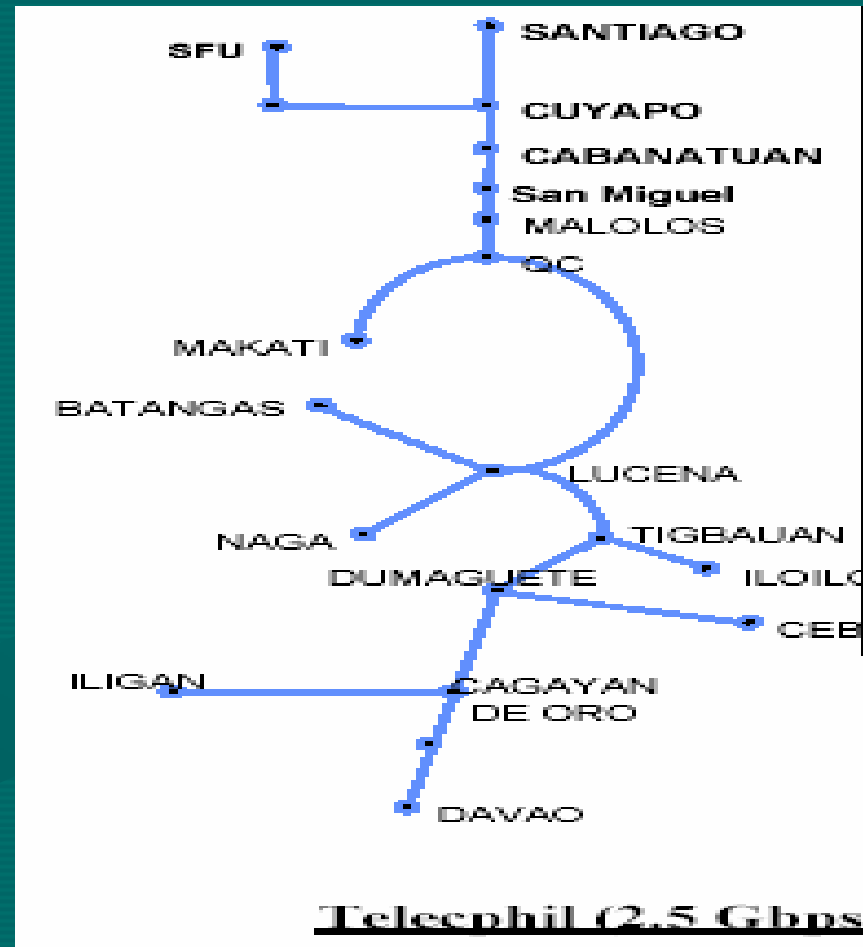
Source: Knowledge Institute analysis

DOMESTIC FIBER OPTIC SYSTEMS

1



2



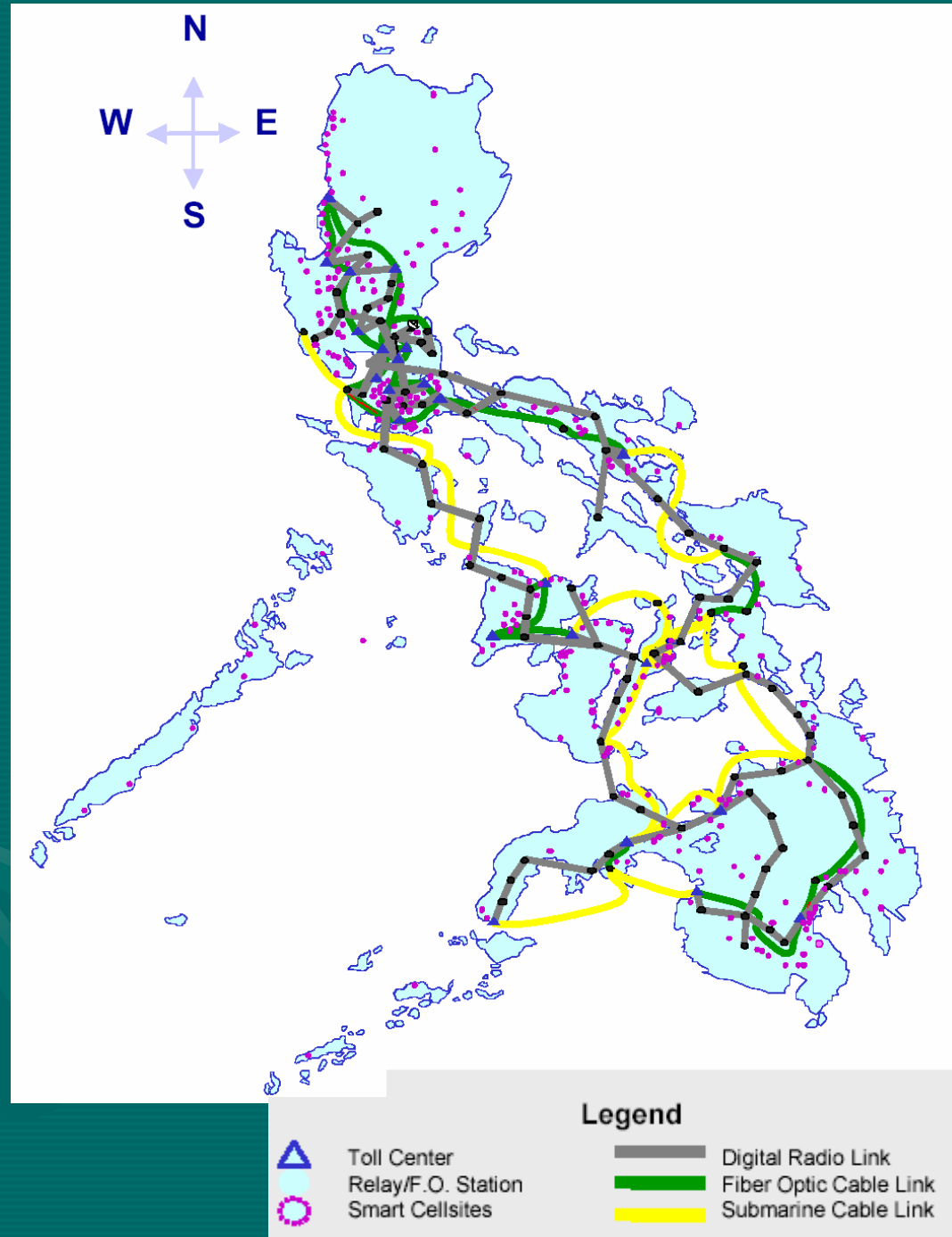
Now upgraded to 10 Gbps

PLDT's 10 Gbps Digital Fiber Optic Backbone:

- ✓ 5,400 km in length
- ✓ Supported by an extensive
Digital Microwave
Backbone
- ✓ Connected directly to
5 international
submarine cables

SMART'S GSM Network

- ✓ 32 switching centers
- ✓ 3,904 base station covering
- ✓ 1,309 towns and cities
- Covers 97% of population



PREGINET : Philippine Research, Education and Gov't Information Network

- The country's National Research and Education Network (NREN)
- Provides a nationwide broadband network that links government, academe, and research institutions in the Philippines
- Interconnects institutions for collaborative R&E activities
- Spearheads the development of user communities and applications on areas such as distance education, agriculture, bioinformatics, disaster management, and networking technologies

PREGINET

3 Exchange Points

20 Access Points

PREGINET uses the DOTC-TELOF facilities to interconnect partners in the Visayas and Mindanao regions

AI3 and APAN links enable PREGINET to interconnect with other international NRENs

AI3
(1.54Mbps/512Kbp)
(plus 9Mbps
downlink)

APAN
(6Mbps)

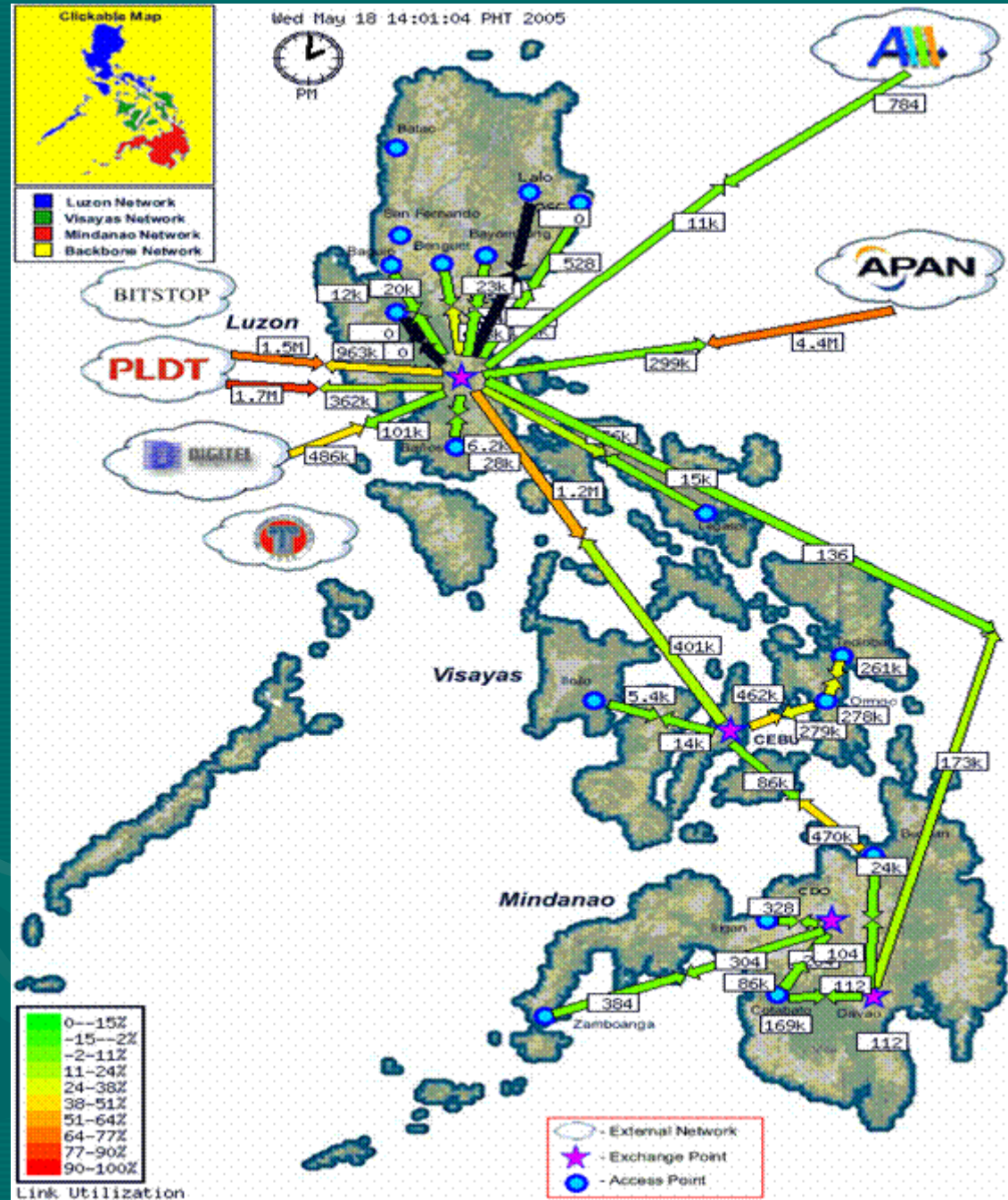


- 256Kbps/512Kbps/ Frame Relay
- E1 (2.048Mbps) Frame Relay
- E1 (2.048 Mbps) (TELOF)

PREGINet Network Map

No. of Partner Institutions
as of March 31, 2005:

Academe =	34
Government =	33
Research =	<u>27</u>
TOTAL	96

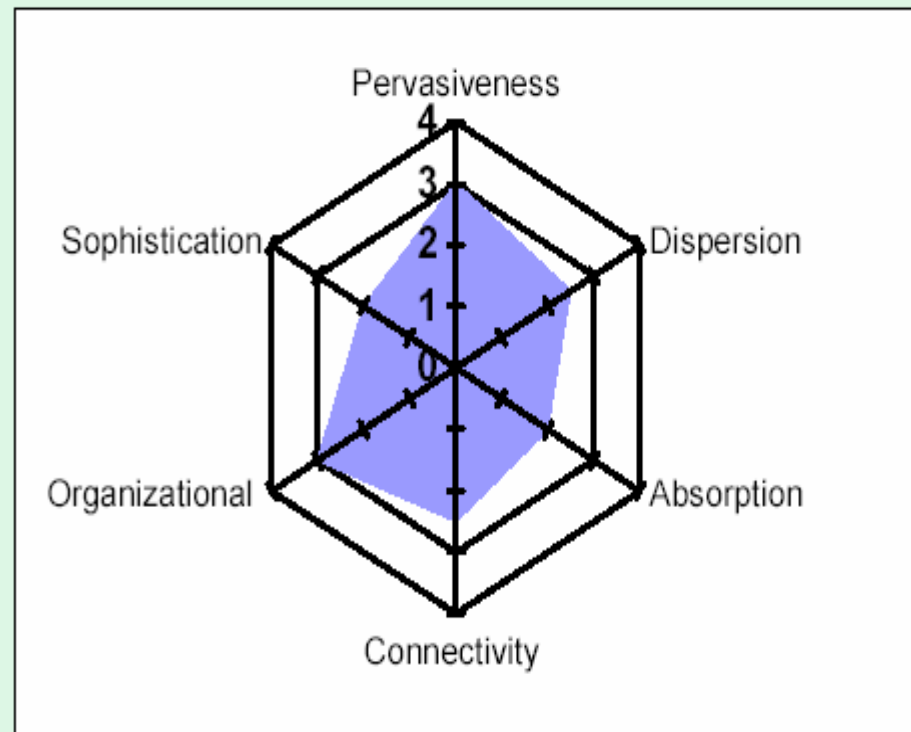


MSU-IIT Internet Connection Summary

Provider	Bandwidth	Cost Per Month
Innove	Trimmed E1 (1.984mbps)	\$1100 USD (VAT Inclusive)
Innove	T1 (Redundant)	\$700 USD (VAT Inclusive)
PREGINet	E1 (Last Mile)	Php30,000 (VAT Inclusive)

State of Internet in the Philippines

Dimension	Value
Pervasiveness	3
Geographic Dispersion	2.5
Sectoral Absorption	2
Connectivity Infrastructure	2.5
Organizational Infrastructure	3
Sophistication of Use	2
TOTAL	15

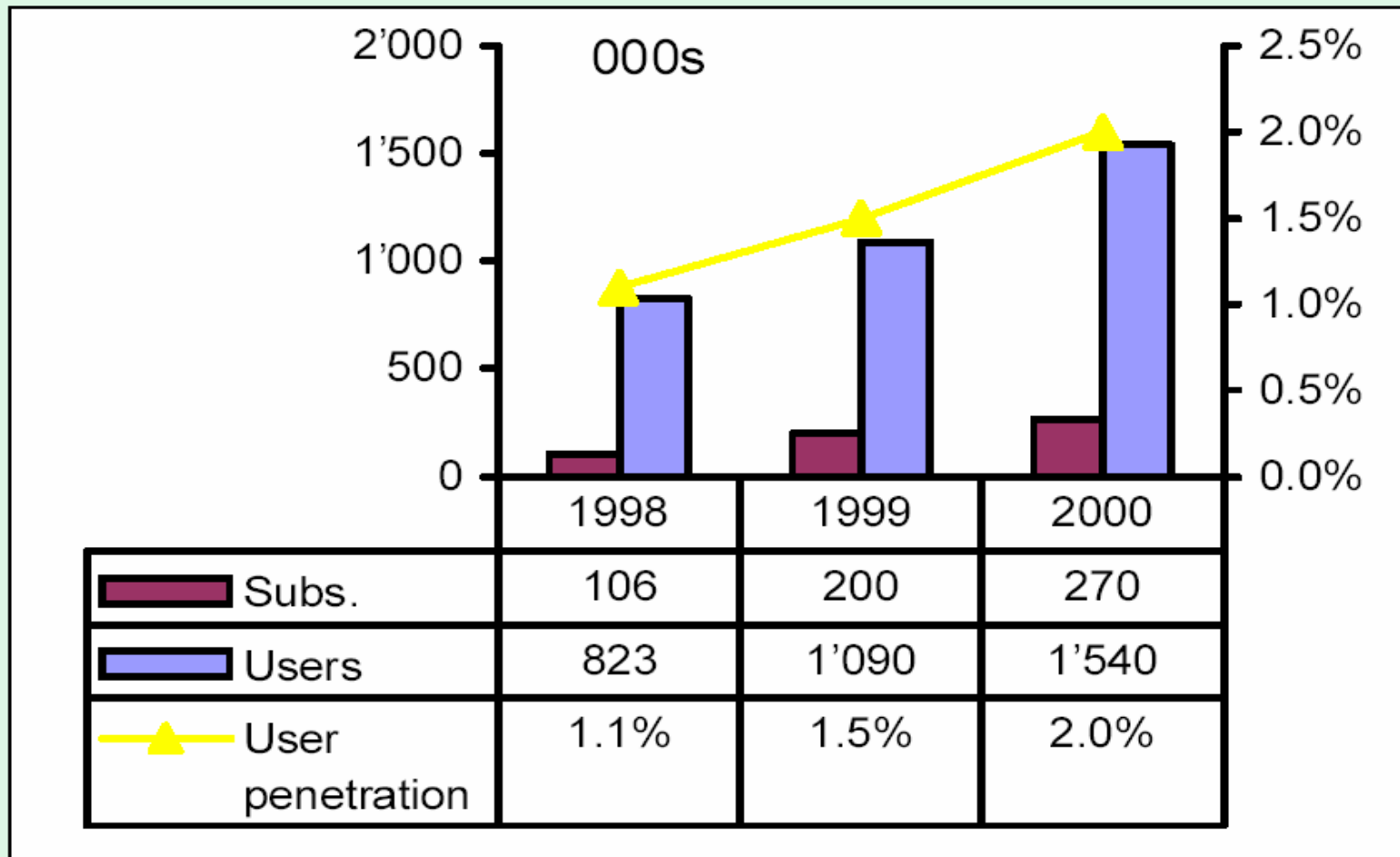


Note: The higher the value, the better. 0 = lowest, 4 = highest.

Source: ITU.

2001 Estimates

Internet Subscribers and Estimated Users in the Philippines



Source: ITU estimates

HEP Networking



ACFA – Asian Committee for Future Accelerators

JLC/GLC/ILC Detector Project

In the Philippines, there are only 3 universities and 1 research center involved in HEP.

There is only 1 university involved in experimental high energy physics.

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Thank you!

