Thailand Approach to bridge the Digital Divide: the Role of Telecenter

paper presented

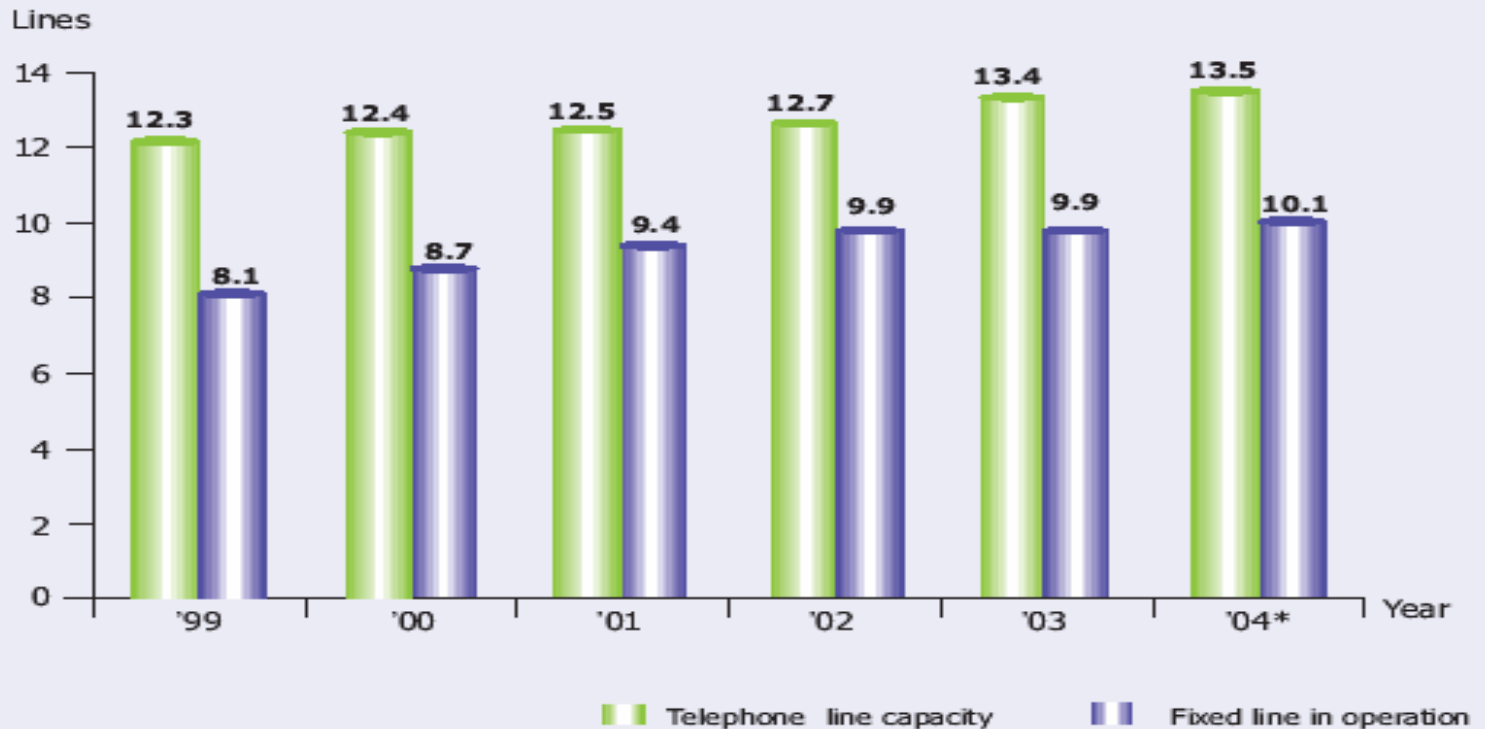APEC Telecenter Training Camp

24-29 January 2005

Outline of the Presentation

- The Digital Divide Situation
- Bridging the Digital Divide
  - Legislation
  - Policy
  - Initiatives/Projects
- Telecenters in Thailand

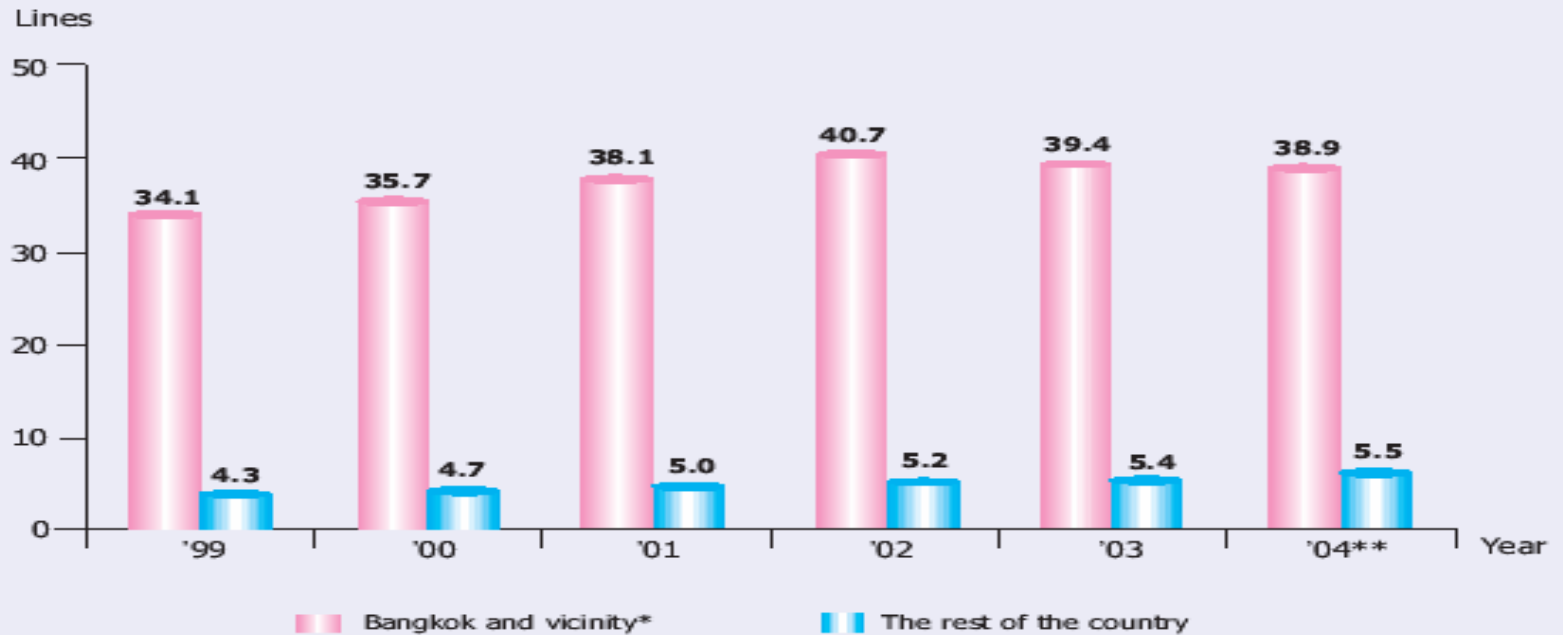# Telecommunication

Number of Fixed Lines per 100 Inhabitants

Source: TOT Corporation Plc. (formerly the Telephone Organization of Thailand)
Remarks: *as of March 2004

Telecommunication

Fixed Lines per 100 Inhabitants by Location

Lines

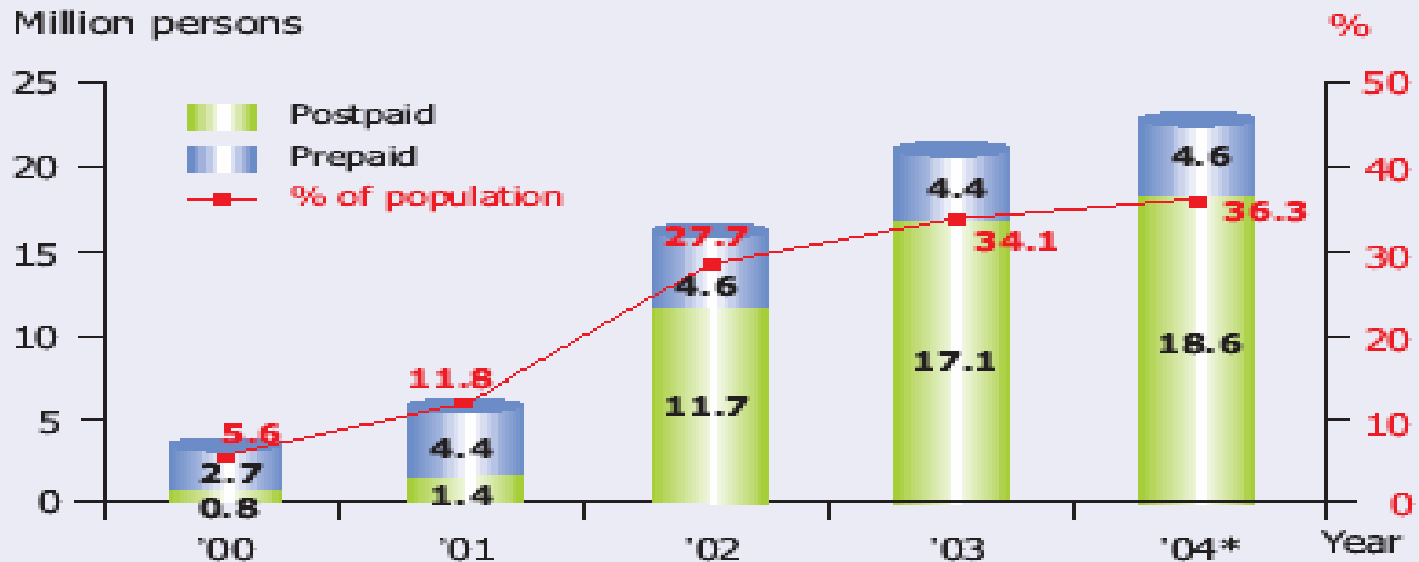| Year	Bangkok and vicinity*	The rest of the country
'99	34.1	4.3
'00	35.7	4.7
'01	38.1	5.0
'02	40.7	5.2
'03	39.4	5.4
'04**	38.9	5.5

Bangkok and vicinity*   The rest of the country

Source: TOT Corporation Plc. (formerly the Telephone Organization of Thailand)
Remarks: *Vicinity includes Pathumthani, Nonthaburi and Samut Prakarn
            **as of March 2004

Telecommunication

Number of Mobile Users

Million persons

Legend:
- Postpaid
- Prepaid
- % of population

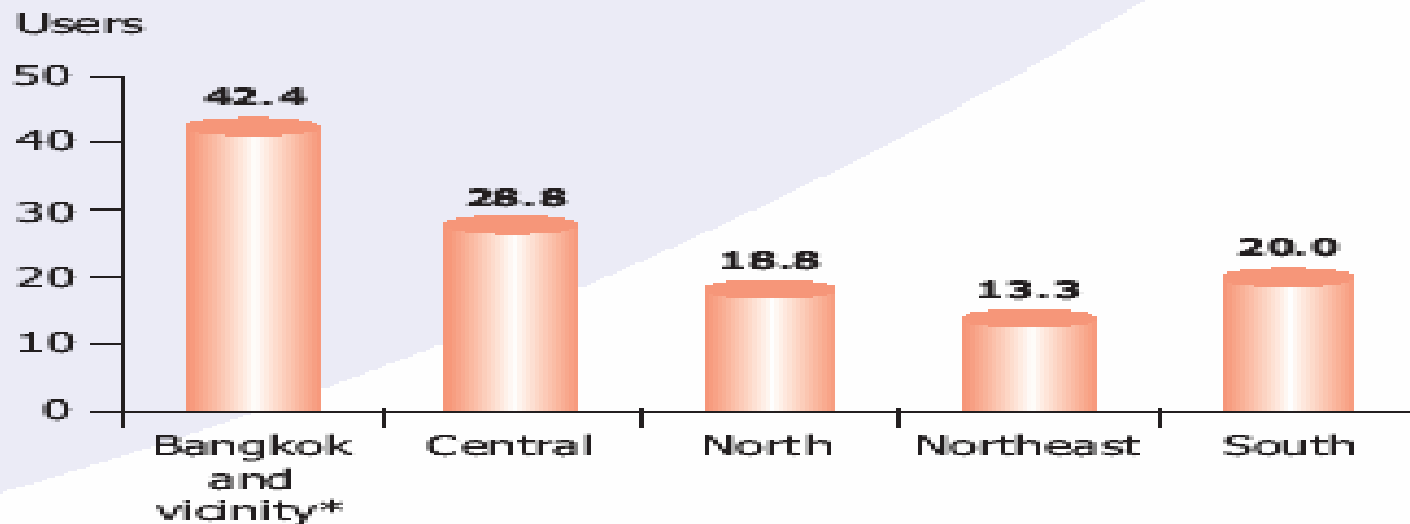| Year	'00	'01	'02	'03	'04*
Prepaid	2.7	4.4	4.6	4.4	4.6
Postpaid	0.8	1.4	11.7	17.1	18.6
% of population	5.6	11.8	27.7	34.1	36.3

Source: CAT-Telecom Plc. (formerly Communications Authority of Thailand)
TOT Corporation Plc. (formerly the Telephone Organization of Thailand)

Remarks: *as of March 2004

Telecommunication

Number of Mobile Users per 100 Inhabitants by Location (2003)

Users

Location	Value
Bangkok and vicinity*	42.4
Central	28.8
North	18.8
Northeast	13.3
South	20.0

Source: National Statistical Office

Remarks: *Vicinity includes Pathumthani, Nonthaburi, Samut Prakam, Samut Sakhon and Nakhon Pathom
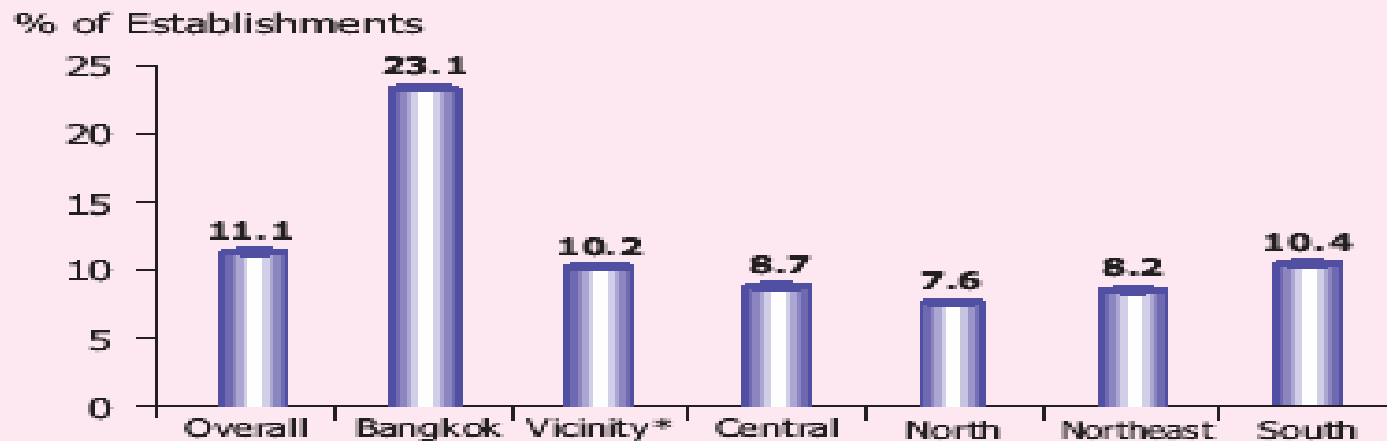
Computer Usage

Number of Households with Computers per 100 Households

Year	2001	2003	2004
Overall	5.8	9.6	11.7
Bangkok	23.3	29.4	30.6
Central	5.5	8.9	12.2
North	3.0	6.8	9.5
Northeast	2.3	4.9	6.5
South	2.3	6.6	8.8

Source: National Statistical Office

Computer Usage

Percentage of Business Establishments with Computers (2003)

% of Establishments

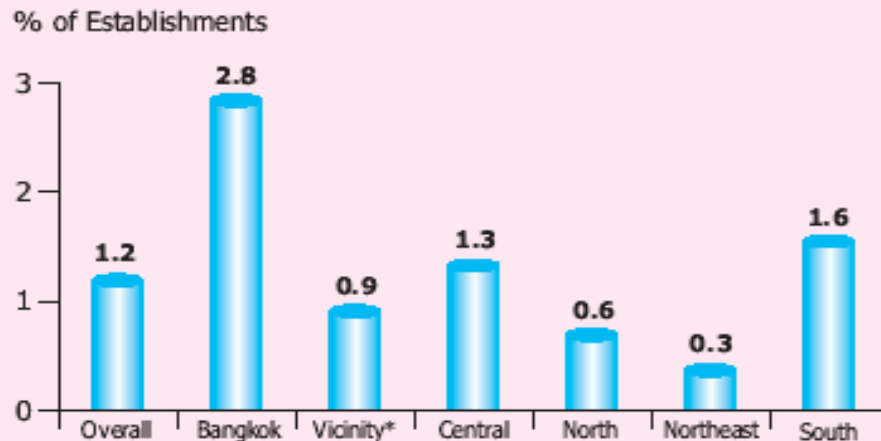| Category	%
Overall	11.1
Bangkok	23.1
Vicinity*	10.2
Central	8.7
North	7.6
Northeast	8.2
South	10.4

Source: National Statistical Office

Remarks: *Vicinity includes Pathumthani, Nonthaburi, Samut Prakarn, Samut Sakhon and Nakhon Pathom

Computer Usage

Percentage of Business Establishments with Web Sites (2003)
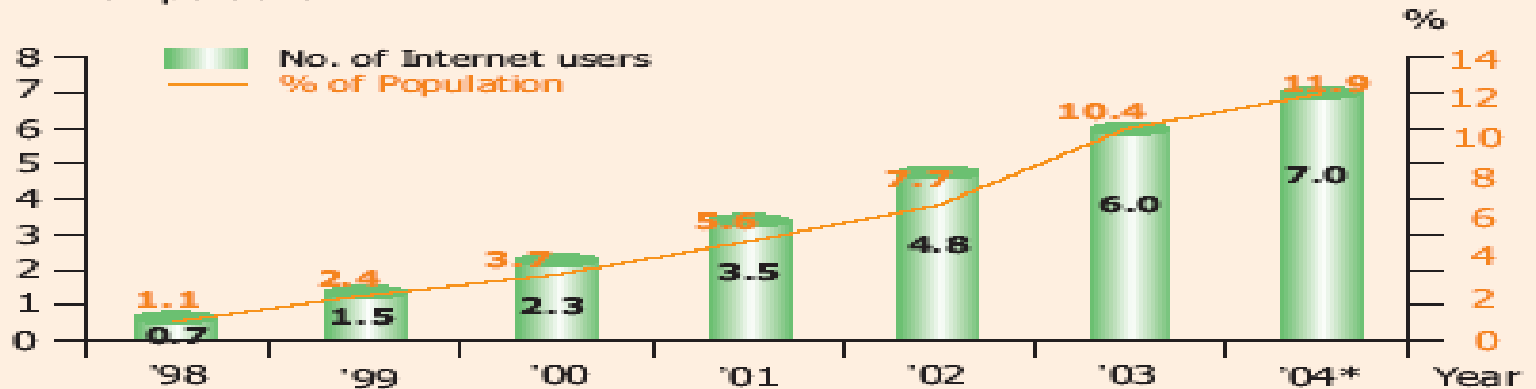
% of Establishments

Source: National Statistical Office

Remarks: *Vicinity includes Pathumthani, Nonthaburi, Samut Prakarn, Samut Sakhon and Nakhon Pathom

Internet

Number of Internet Users

Million persons

No. of Internet users
% of Population

'98 — 1.1 / 0.7
'99 — 2.4 / 1.5
'00 — 3.7 / 2.3
'01 — 5.6 / 3.5
'02 — 7.7 / 4.8
'03 — 10.4 / 6.0
'04* — 11.9 / 7.0

Sources: Internet Service Provider Club,
National Electronics and Computer Technology Center,
National Statistical Office

Internet

## Internet Penetration by Location

Region	No.of users (million persons)			Users per 100 inhabitants		
	2001	2003	2004	2001	2003	2004
Whole kingdom	3.53	6.03	6.97	5.6	10.4	11.9
- Bangkok	1.23	2.01	2.00	16.0	26.9	26.6
- North	0.52	1.34	1.52	4.6	10.1	11.2
- Central	0.83	1.00	1.21	5.9	9.7	11.4
- Northeast	0.56	1.07	1.49	2.6	5.6	7.7
- South	0.39	0.62	0.76	4.7	8.2	9.9

Source: National Statistical Office

Remarks: *Vicinity includes Pathumthani, Nonthaburi, Samut Prakarn, Samut Sakhon and Nakhon Pathom

Internet

International Internet Bandwidth (as of December each Year)
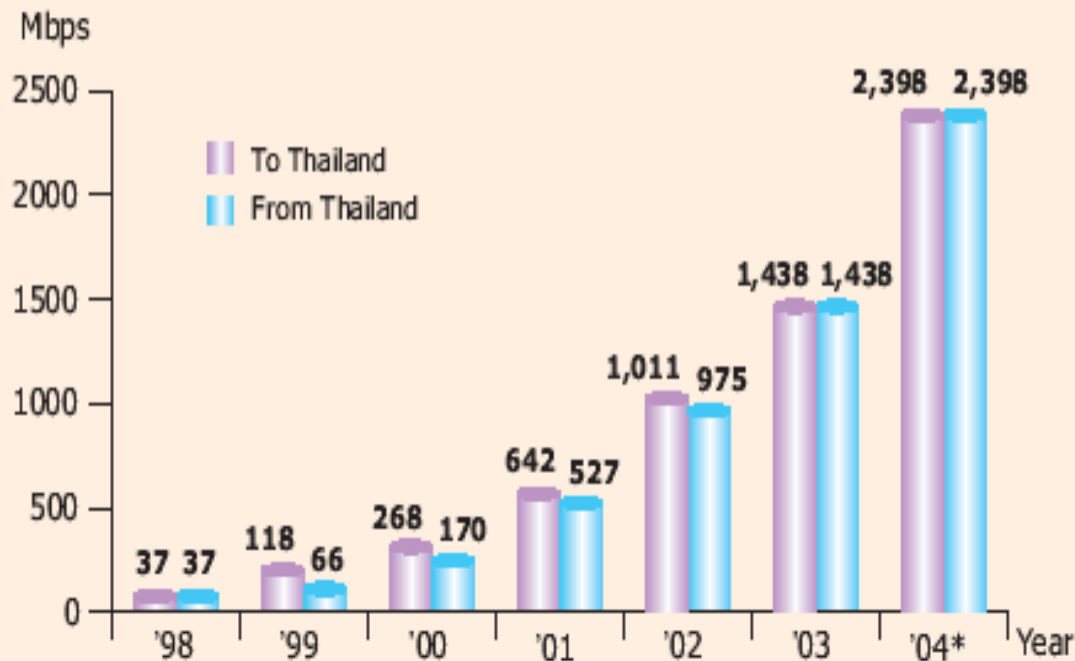
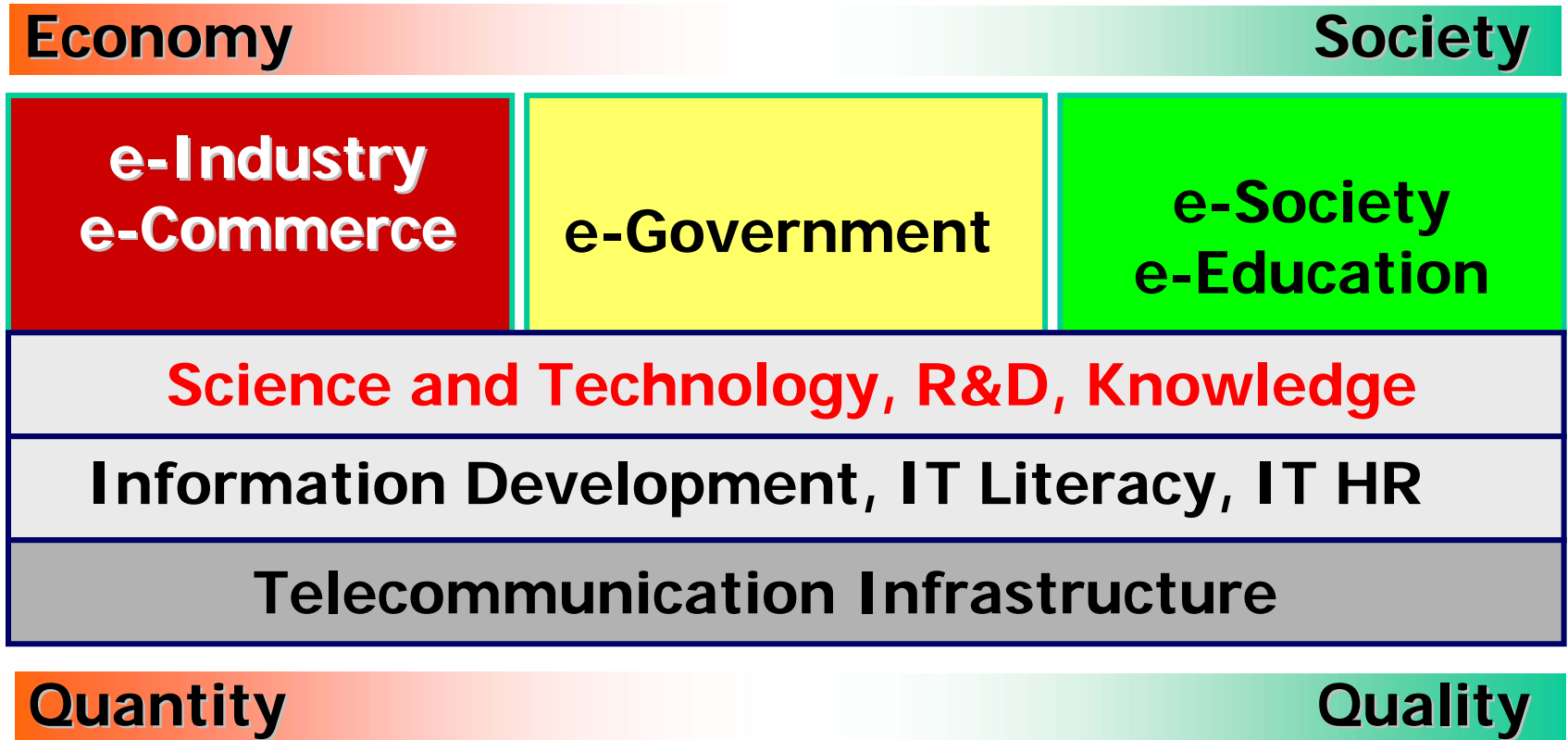Source: National Electronics and Computer Technology Center (*as of June 2004)

Remarks: The international Internet bandwidth represents the capacity of the communication lines of the ISPs. During 1999-2002, many ISPs expanded their lines "simplex" satellite service in order to cope with their congestions in the inbound traffic. In late 2002, most ISPs opt for high-quality fiber links and symmetric satellite services. This resulted in equality between the inbound and outbound capacities.

Legend:
- To Thailand
- From Thailand

Year	To Thailand (Mbps)	From Thailand (Mbps)
'98	37	37
'99	118	66
'00	268	170
'01	642	527
'02	1,011	975
'03	1,438	1,438
'04*	2,398	2,398

Laws and Regulations

- The Constitution of the Kingdom of Thailand 1997 article 78: state's responsibility to provide information infrastructure

- The Act on the Organization to Assign Radio Frequency and to Regulate the Broadcasting and Telecommunication B.E. 2543 (2000): the instigation of NTC and NBC

- The Telecommunication Business Act B.E. 2544 (2001): NTC and USO

- The National Education Act B.E. 2542 (1999): role of technologies in education

ICT Development Program

Flagships and Infrastructures in IT 2010

Economy		Society
e-Industry e-Commerce	**e-Government**	**e-Society e-Education**

Science and Technology, R&D, Knowledge

Information Development, IT Literacy, IT HR

Telecommunication Infrastructure

Quantity		Quality

Strategy 2:
ICT Utilization to Enhance Quality of Thai Life and Society

Encourage people to <u>utilize suitable information</u> by accelerating <u>universal access</u> as instrument to create knowledge, particularly local knowledge, and provide <u>value-added to agricultural and industrial products</u> from rural communities as well as revenue increase. This is to create <u>Knowledge-based Society</u> in conjunction with <u>risk management from globalization effect.</u>

1. Develop <u>telecommunication</u> infrastructure
2. Utilize law related to development of Information Infrastructure in accordance with the <u>Article 78 of the Constitution</u>
3. Utilize ICT for education, content creation and learning
4. Encourage <u>translation of books, document, and information</u>
5. Promote information and knowledge development to enhance the quality of community
6. Increase the <u>role of mass media in ICT knowledge diffusion</u>
7. Encourage <u>local administration to utilize information infrastructure</u> and electronics media
8. Capacity Building in order to exploit the full use of ICT
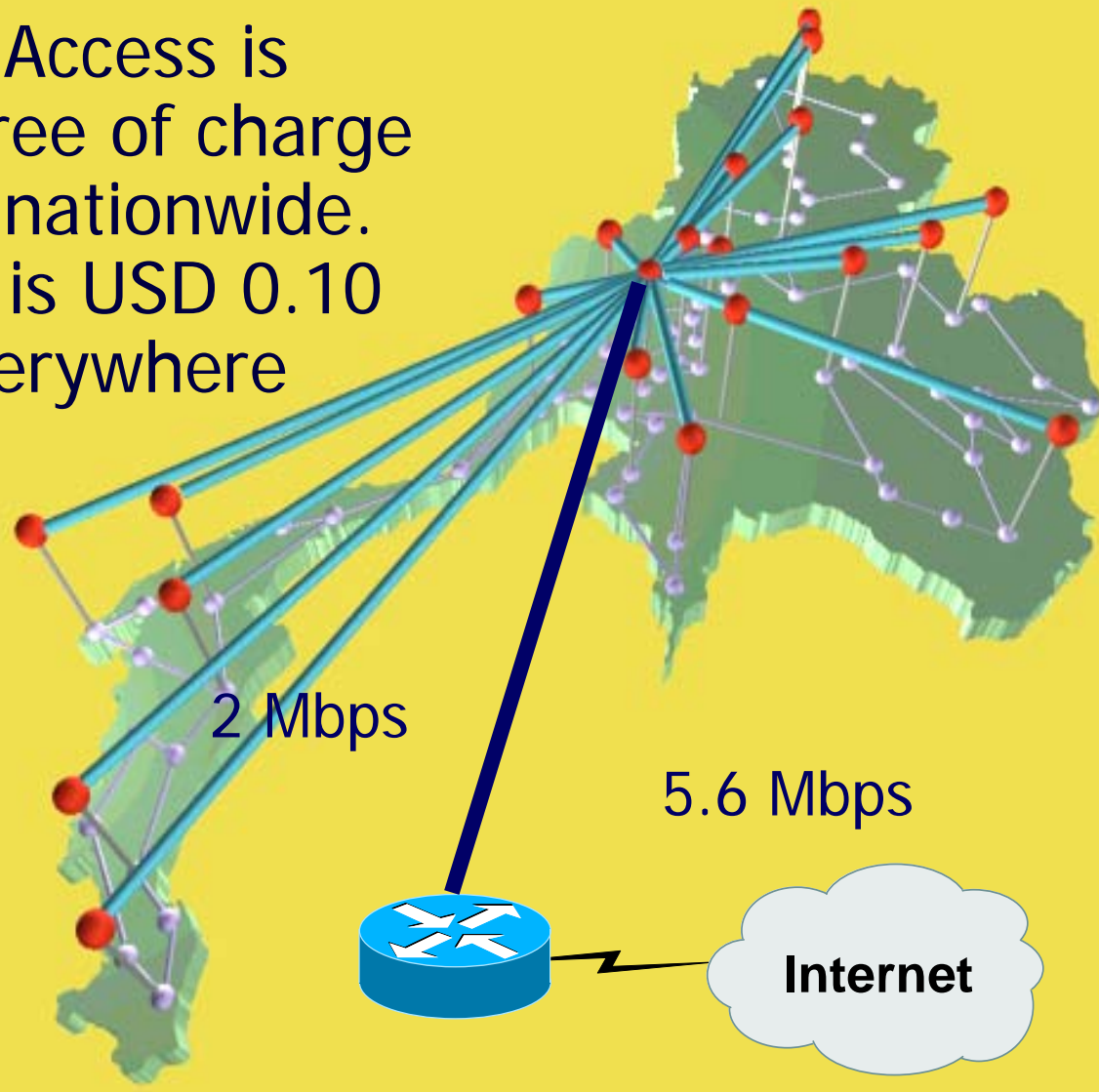9. Create confidence in the use of e-Commerce in all economic sectors

Goals

- **provision of at least seven telephone numbers (32 kbps minimum) in every community (village) by 2005**

- **giving at least 70% of low income earners access to ICT services by 2006**

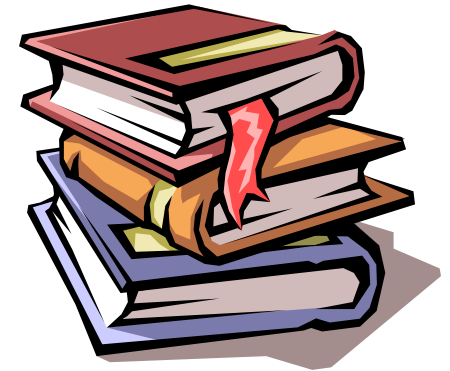- **having a community Telecenter in every sub-district by 2006**
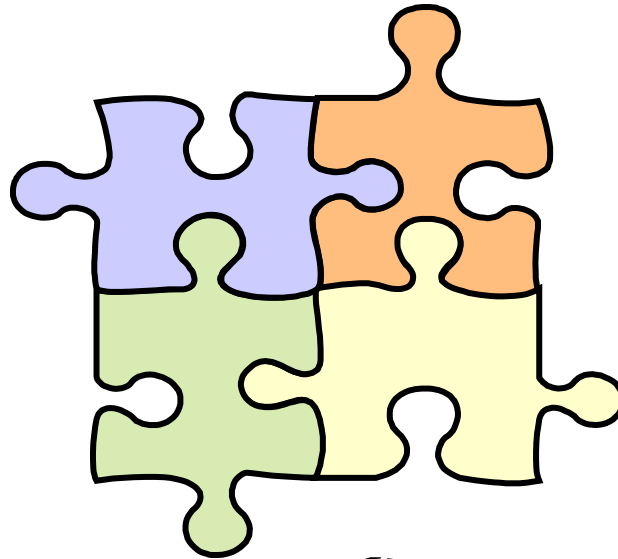
Awareness
Creation

Promotion of
Content
Development

Provision of
Network
Access

Training of
Teachers

Promotion of
Classroom
Activities

Computer "*Sinsamutra*" (1GHz)

Introducing Computing

Breakthrough price @ 10,900 Baht

First offering, May 9 – 31, 2003

Project Objectives

- Bridge the digital divide
  - A foundation for Thais to become members of e-society
  - Triple the number of PCs sold annually
- Increase market competition
  - Support hardware industry
  - Create a new market price point
- Introduce the nation to open source software

ICT PC Project for Children

- Need to grow market emerges – targeting the young
- Need for affordable PCs for schools due to low purchasing power and high operating costs

Project Objectives

- Increase ICT diffusion at both ends of market and bridge the digital divide
- Provide rural schools with computer labs and part-exchanged equipment
- Promote PC skills at all levels, from first-time user to systems administrator
- Provide ICT training and upskilling
- Introduce social engineering models to increase ICT awareness and adoption
- Establish a scalable and sustainable framework for helping schools nationwide

Telecenters

Telecenters in Thailand

- Still in embryonic stage – a few pilots scattered around the country, initiated with the support of external agencies such as
  - NECTEC 4 pilot centers
  - Thailand Canada Telecenter Project
  - Thai RuralNet
  - TOT Corporation

Pilot Sites

Lampang

Pitsanuloke

Surin

Chantaburi

An initiative to bridge the digital divide in local community

Other projects

- Internet Kiosk through post offices
- One Temple One e-Learning Center