National ICT Policy in Thailand

By

Chadamas Thuvasethakul[1] Ph.D., and

Thaweesak Koanantakool[2] Ph.D.

National Electronics and Computer Technology Center,
National Science and Technology Development Agency,
Ministry of Science, Technology and Environment, Thailand.

Overview

Over the past decade, *Information and Communications Technology* (ICT) has been recognized as a potential enabler for national economic and social development and for strengthening competitiveness for Thailand. The government, then, started the initiative in 1992 to set up the *National IT Committee*, or NITC, which is a high-level policy body chaired by the Prime Minister. Its members comprise of executives from relevant public and private sector. The mandates of NITC are to develop policies and plans to promote ICT development and utilization in the country. The *National Electronics and Computer Technology Center* (NECTEC), a semi-autonomous government agency under the Ministry of Science, Technology and Environment, has been assigned to host the secretariat office and to conduct supporting work for the committee.

I. IT2000 – The First National IT Policy

In February 1996, the first National IT Policy, called **IT2000**, was announced by the NITC and endorsed by the Cabinet. IT2000 put forward the vision for the country to properly exploit IT to achieve economic prosperity and social equity. To this end, the policy emphasized three common development agendas, i.e., (i) to build an equit-able national information infrastructure (NII), (ii) to invest in people to accelerate the supply of IT manpower and to develop an IT-literate work-force, and (iii) to achieve good governance
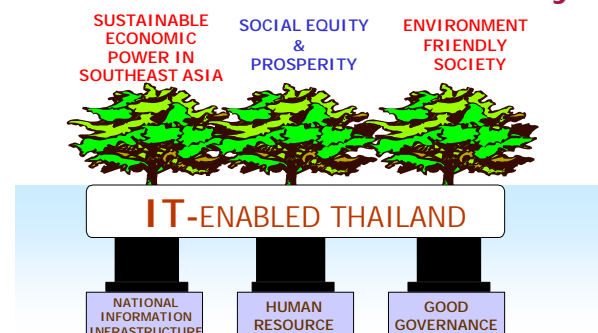
through the use of IT in delivering public services and in government administration.

In bringing such policy to implementation, each government agency developed its own master plan to correspond with the direction set forth in IT2000.

Through the course of IT2000 implementation, it was found that many development programs were achieved as planned, while many others were still far from the target, especially those concerning human resources and government sector. This was mainly due to the economic recession that caused the decline in government investment in ICT.

Under the present circumstance where the general economy resumes its positive outlook and with the new administration's leadership in place, it is timely that Thailand starts to take off to the second decade of ICT development.

IT2000 - National IT Policy

SUSTAINABLE ECONOMIC POWER IN SOUTHEAST ASIA — SOCIAL EQUITY & PROSPERITY — ENVIRONMENT FRIENDLY SOCIETY

IT-ENABLED THAILAND

NATIONAL INFORMATION INFRASTRUCTURE — HUMAN RESOURCE — GOOD GOVERNANCE

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1 *Dr.Chadamas Thuvasethakul* <chadamas@nectec.or.th> is the Director of National Information Technology Committee Secretariat Office, National Electronics and Computer Technology Center.
2 *Dr.Thaweesak Koanantakool* <htk@nectec.or.th> is the Director of National Electronics and Computer Technology Center and Executive Secretary of National Informational Technology Committee.

What have been achieved under IT2000?

From the basis of framework and recommendations put forward in IT2000, many programs and/or projects has been initiated by various government agencies, including NECTEC, under its capacity as NITC secretariat and as a national R&D center. To name a few of those initiatives, they are:

➢ **National Internet Exchange Points**, where all domestic Internet traffic get exchanged without going out of the country;

➢ **SchoolNet Thailand**, a national school informatization program to empower all schools to access a large pool of information resources using the Internet;

➢ **Government Information Network** (GINet), a government backbone network to facilitate intra- and inter- agencies communication and information exchanges;

➢ **Development of legal infrastructure** by introducing new laws to support the application of ICT in the country.
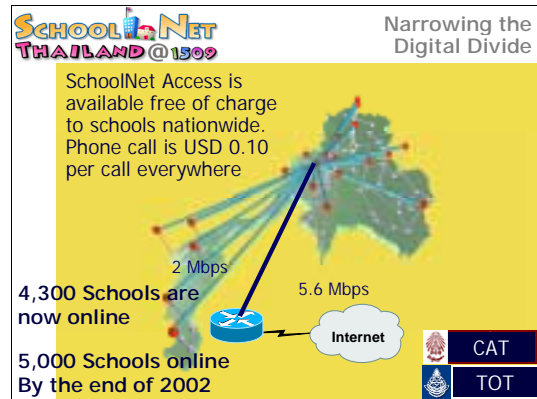
Two **National Internet Exchange Points** have been set up in Thailand. They are the peering points among Internet Service Providers. The domestic interconnection architecture helped boosting network interconnection speed and reliabilities.

Internet Connectivities in Thailand (March 2002)
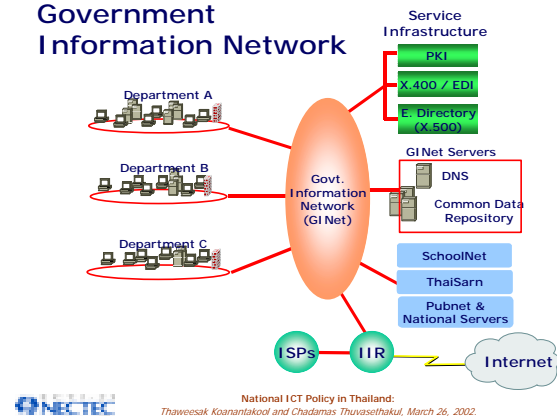http://www.nectec.or.th/internet/map/
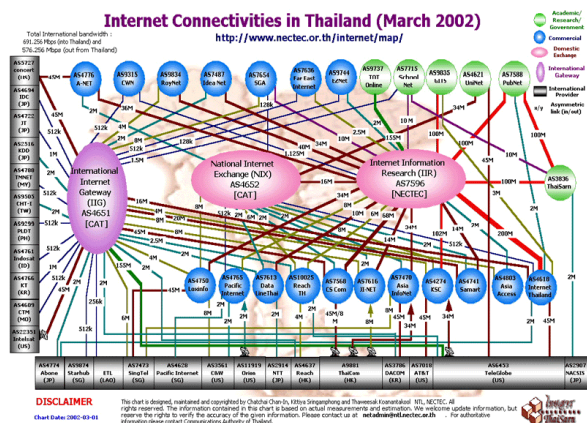
Schoolnet Thailand: Presently, SchoolNet connects over 4,300 schools to the Internet. The network has been designed to serve the goal of universal access for every school nationwide. More specifically, a school only pays the telephone charge at the local-call rate per connection (at 8 US cents per call), and no Internet access charge, regardless of where they are located.

Furthermore, content creation programs and activities have been initiated to promote the use of Internet in teaching and learning, for example, digital library and digital archive, which contains digitized materials in various forms with proper indexing and search engine for ease of use. An easy-to-use tool was also developed for teachers to create their own content or teaching materials to add to the digital library. (See the web site http://school.net.th for more information.)

Narrowing the Digital Divide

SchoolNet Access is available free of charge to schools nationwide. Phone call is USD 0.10 per call everywhere

2 Mbps
5.6 Mbps
4,300 Schools are now online
5,000 Schools online By the end of 2002
Internet
CAT
TOT

Government Information Network

National ICT Policy in Thailand:
Thaweesak Koanantakool and Chadamas Thuvasethakul, March 26, 2002.

Government Information Network: Government IT Services (GITS), the unit that runs GINet, presently provides a nation-wide, high-speed virtual private network (VPN) service to government agencies.

In addition to network connection services, GITS provides many other value-added services for its clients such as electronic daily news clipping, news exchange service, government directory service, e-Government Portal and secure electronic mail using digital ID and public-key infrastructure (PKI). GITS has provided a pilot CA service to support digital signature applications to its users since 2000. (See http://thaigov.net/ for more information.)

With regard to the **legal infrastructure**, the Electronic Transactions Bill, which was drafted by NITC, was approved by the Parliament and enacted on December 4, 2001. The Act will become effective on April 3, 2002, 120 days after the enactment. The Act also incorporated Electronic Signature provisions.

Four other laws are still in the pipeline, i.e., data protection law (presently awaiting approval from the Cabinet), national information infrastructure law (presently awaiting to be submitted to the parliament), computer crime law (presently awaiting approval from NITC), and electronic funds transfer law (presently in the drafting process). It is believed that these laws should lay down sufficient legal framework for Thailand to enter the new economy with more confidence.

From IT2000 to IT2010

IT2000 has provided the framework and guideline for subsequent IT policies and initiatives for the past five years. Since then, ICT has changed tremendously, both in terms of technological advancement, as well as its widespread application in virtually all sectors of the economy. Meanwhile, the Thai economy and society have evolved enormously, particularly as the result of our financial crisis, which started in 1997.

II. IT2010 = "IT Policy 2.0"

The changes that have occurred in international arena such as globalization, borderless commerce, creation of new non-tariff barriers, also affects the country. Though the principle of the three pillars of IT2000 still prevailed to a certain extent, the NITC realized that there was a need for a second phase of national IT policy, to give a thrust for Thailand to move forward into the next wave of digital economy.

As a result, the NITC secretariat has teamed up with the *Policy Innovation Center* at King Mongkut University of Technology Thonburi, to conduct a research and develop a ten-year National IT Policy for the period 2001-2010, or **IT2010**.   In the development of IT2010 and policy recommen- dations, important inputs that were considered were:
- an analysis of impacts and lessons learned during IT 2000 implementation,
- current situation in both IT production (IT industry) and IT consumption in various sectors in the country,
- policy development in other countries to understand the global trend, and
- issues which are relevant to future develop- ment of the country, as specified in the Ninth National Economic and Social Development Plan and the recent development of the 'e- Thailand' initiative.

In order to ensure public participation during the policy development process, NITC Secretariat/- NECTEC had organized many public seminars in Bangkok and other regions in the north, north- east, and south. All opinions and comments were gathered, analyzed and used as inputs for sub- sequent revisions.

The study was completed in September 2001 and the result was synthesized and compiled for submission to NITC (in October 2001) and subsequently to the Cabinet for approval.   On March 19, 2002, the Cabinet approved and endorsed IT2010 as a policy framework for Thailand ICT development in the first decade of the twenty-first century.

IT2010: Towards the Knowledge- Based Economy

It was recognized that to build a strong and sustainable economy, the nation must try harder to stand firmly on her feet before entering the international competition. His Majesty the King's "Sufficiency Economy" calls for a new focus of development: to emphasize on improvement the quality of life of its population through knowledge and more self-reliance, and to reduce social differences to a minimum.
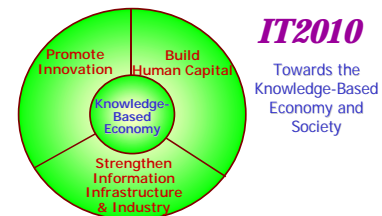
Thus, IT2010 has set the key development objectives to exploit the benefits of information and communications technology to move Thailand to the "Knowledge-Based Society and Economy (KBS/KBE)". The development is therefore not on focusing on "technology" *per se*, but rather, on the good use of ICT that would drive overall national economic and social development.

To this end, IT2010 identifies three cross-cutting principles to support the "ICT for KBE/KBS" framework as follows:

1. Building human capital,
2. Promote innovation, and
3. Invest in information infrastructure and promote the information industry.

Under this framework, three specific development goals based on "technological and social indicators" were identified. These are:
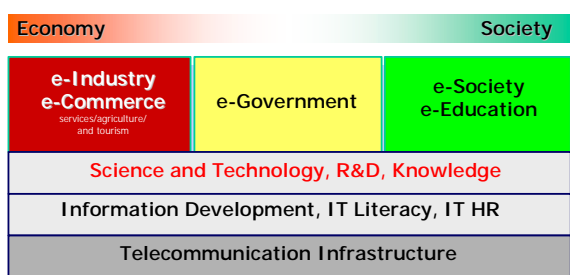
1. To raise the technological capability of the country, as classified by the UNDP *Techno- logical Achievement Index* from being in the "Dynamic Adopters" group", to the "Potential Leader" group, by 2010,
2. To increase proportion of "Knowledge Workers" in the country from 12% (in 2001) to 30%, by 2010,

3. To increase the share of "Knowledge-Based Industries" within the overall economy to 50% by 2010.

To achieve the goals, IT 2010 identified five main flagships that have to be developed as follows:

1. *e-Society*, covering issues such as digital divide, quality-of-life, culture, health, public participation;

2. *e-Education*, includes issues of life-long learning, computer literacy, human resource development, virtual education, etc.;

3. *e-Government*, including public service via electronic service delivery, employment, legal infrastructure;

4. *e-Commerce*, with special focus on 'e-services' including not only finance, tourism and IT services, but also other industries; and

5. *e-Industry*, focusing on e-manufacturing and IT-related industries, plus issue such as standardization.

ICT Development Program:
Flagships and Infrastructures in IT2010

Economy		Society
e-Industry e-Commerce services/agriculture/ and tourism	**e-Government**	**e-Society e-Education**
Science and Technology, R&D, Knowledge		
Information Development, IT Literacy, IT HR		
Telecommunication Infrastructure		

Development of each of the above mentioned sector must be synchronized and harmonized with all the other sectors. Furthermore, the development schemes in each sector must be hinged to strategies that are essential to knowledge-based economy and society. In other words, the schemes must comply with the three guiding principles: enhancing human capital, create innovation, and strengthening the information infrastructure.

III. Key to Success

In order to successfully implement development programs under IT2010, there are many crucial conditions, factors and variables that must be taken into account. Through our experiences, we recognize that there are many impediments and obstacles that can hinder ICT development, and create difficulties (at times insurmountable) for implementation of many development programs. Therefore, the National ICT Development Policy 'Version 2.0' has imposed five necessary conditions for development:

Giving priority to the creation of useful information, contents and knowledge;
Developing human capacity on a continual basis;
Closing the Digital Divide;
Creating a clear-cut ;eadership mechanism in National ICT Development; and
Linking the policy with the operations of the National IT Committee.

We will discuss each condition in detail.

1. Giving priority to information, contents and knowledge

Information, contents and knowledge must receive priority over, or at least not less than, investment in basic infrastructure, tools, equipment and materials.

All future infrastructure development projects must guarantee cost-effectiveness of investments on hardware. Specifically, investments on information and content must be substantial. Furthermore, there should be a policy to encourage the establishment of "Knowledge Centers" at various levels of society, starting with the Local Administrative Organizations, schools, communities and state agencies, including small and medium-sized enterprises.

2. Develop Human Capacity on a Continual Basis

Development of human resources and personnel must be carried out on a consistent/continual basis, at all levels of education: formal, non-formal, and voluntary education system.

The human resource development program shall also encompass development and upgrading of the national labor force to increase knowledge and skills aimed at achieving sustainable development of indigenous human resources, as well as developing "Knowledge Workers".

3. Closing the Digital Divide

Reduction of social disparity and lack of opportunity deriving from development of information technology, known as the "Digital Divide" by creating "Digital Opportunity" for the Thai population.

Nevertheless, in focusing on such disparity, not only should one consider disparity from infrastructure or equipment (Infrastructure Divide), but also from unequal illiteracy (Literacy Divide), differences of culture (Cultural Divide), and lack of management expertise (Management Divide).

4. Creating a clear-cut leadership mechanism in National ICT Development

Establish a permanent and clear-cut system for creating "Leadership" to be an integral part of the National ICT Development Policy, and incorporated into the Principles & Procedures for Policy Implementation.

The country's top administrator must necessarily give such leadership and guidance. This shall also include the structuring of an efficient management structure and adherence to good governance. The details are as follows:

- **The Prime Minister must be the Chairman of the National Informational Technology Committee himself** (and not to delegate this role to anyone). The NITC shall be equipped with a policy support unit, or the "ICT Policy Office," to be responsible for information management and preparation of technical papers to facilitate continuance of policy implementation.

  This office should also be tasked with monitoring, appraisal, and evaluation of results. The competent officer, in the capacity as Committee Secretary or ICT Policy Office manager, shall submit development & progress reports to the National IT Committee on a monthly basis.

  The ICT Policy Office shall be an independent entity, and shall not operate under the umbrella of any state agency or comply with cumbersome official regulations due to the rapidity of change of technology and foreign policy. It is deemed expedient that the ICT Policy Office must recruit the highest quality and caliber personnel to run the office.

- **The ICT Operations Support Office:** The main duties and functions of this office is to render support as required by the implementation of policies, which shall cover both provision of technology and project supervision/management, function as a Consultant Office for the NITC, support Research & Development programs, project management and carry out assignments, and support State Agencies which are in the process of restructuring under the e-Government Development Program. However, the Office should allow private sector and industrial sector participation in most operations/assignments, by establishing a fair, transparent, and efficient outsourcing system.

- Both **the "ICT Policy Office" and the "ICT Operations Support Office" must closely coordinat**e in implementing the policies set by the National IT Committee. When the duties and responsibilities of both offices grow beyond a critical level, or under a critical pressure to act more dynamically, the next appropriate step would be the establishment of the Ministry of Information and Communications Technology. The establishment or the said organization to be executed within the schedule of this policy.

- The Ministry and its Departments shall render their participation in the capacity of the authority responsible for certain parts of the development projects that are related to their own organization and services, which the NITC has made into policy, or has reached a resolution for implementation. In this case, a master plan should be developed and the budget bureau should allocate sufficient budget for implementation.

  If this operational stage cannot be undertaken due to limitations or inadequacies, i.e., lack of personnel and/or expertise, then the allotted budget can be used for hiring private sector to carry out the work, in order to create jobs and increase employment within the economy, whereby the contractors shall be dependent on the ICT Operations Support Office as the Project Consultant, or the said budget could be used to request the Office to undertake the assignments as deemed suitable and appropriate.
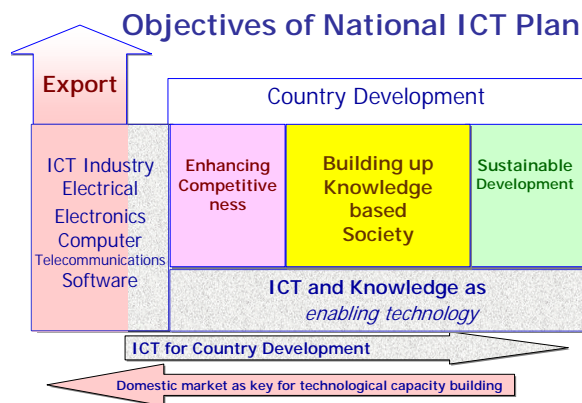
5. Linking the policy with the operations of the National IT Committee, NTC, NBC.

Establish the link between the policies and operations of the National IT Committee with the National Telecommunications Committee and National Broadcasting Committee in order to make the most of ICT convergence.

The NITC is entrusted the duties and responsibilities as provisioned in Section 78 of the Constitution of the Kingdom of Thailand 1997. This Section defines the state's obligation to facilitate Thai society with the means for efficient, indiscriminate and equal accessibility and usage of the IT Basic Infrastructure. The policies of NITC should be linked with the policies and operations of the National Telecommunications Committee, the National Broadcasting Committee, which are tasked with duties/responsibilities provisioned in Section 40 of the Constitution: to regulate and manage radio frequencies to gain the highest possible benefits for the general public.

IV. The Way Forward

IT2010 Policy Framework was well accepted by the people and the government. Some of the crucial "conditions" stated explicitly in IT2010 have already been met. For example, the Prime Minister, for the first time since 1992, chaired the NITC by himself since he took office. In addition, a National ICT Plan for the year 2002-2006 has been drafted through a series of close consult- ation between NITC Secretariat office and the stakeholders. Moreover, the cabinet has decided in early March 2002 to go ahead with the establishment of the Ministry of ICT within October 2002.

Objectives of National ICT Plan

Export

Country Development

| ICT Industry Electrical Electronics Computer Telecommunications Software | Enhancing Competitive ness | Building up Knowledge based Society | Sustainable Development |

ICT and Knowledge as *enabling technology*

ICT for Country Development

Domestic market as key for technological capacity building

The National ICT Plan is expected to be released in April, 2002 and the new ICT Ministry will take charge of the missions set out in the National ICT Plan for the country.

Several strategic actions are expected to drive Thailand into Knowledge-based Economy/Society very positively.