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<td><strong>Author(s)</strong></td>
<td>Raja Malik Mohamed</td>
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Information Technology In The Malaysian Public Sector

By

Raja Malik Mohamed
INFORMATION TECHNOLOGY IN
THE MALAYSIAN PUBLIC SECTOR

By

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ASIAN MASS COMMUNICATION RESEARCH &
INFORMATION CENTER
(AMIC)
ANNUAL CONFERENCE ON
COMMUNICATIONS, CONVERGENCE AND
DEVELOPMENT

at
Montein Hotel, Bangkok, Thailand
23 - 25 July 1994
INTRODUCTION

OBJECTIVE

- TRENDS IN IT FOR NATIONAL DEVELOPMENT
- CURRENT IT FOCUS
- FUTURE
A. TEND

1. POLICY
2. EQUIPMENTS / SERVICES
3. COMPUTER ISATION PROJECTS
4. PERSONNEL
5. STRUCTURE
1. POLICY

- 1988 Announcement by Minister in Prime Minister’s Department in an International Seminar “Computers For Development - The Research Challenge”


- CURRENT Inter-agency Networking:
  - statement of direction
  - NTP (National Telecommunications Policy)
TRENDS

2. COMPUTER EQUIPMENTS / SERVICES

Mid-60's
National Electricity Board (1965)
Statistics Department (1966)
Internal Revenue Department
Examinations Syndicate

1973 Initial Use of Data Communication Services

1977 Introduction of Minicomputers on a wide scale

1984 Introduction to MAYPAC

1986 153 mainframe
      94 mini computers

1989 394 mainframes/minis
      7,425 PCs

1992 101 mainframes
      261 minis
      19,189 PCs
TREND

3. COMPUTERISATION PROJECTS
(1987-1992)

ESTIMATED VALUE OF PROJECTS

1987-1992: RM 797.74 m (US $320 m)
1988-1989: RM 300.2 m (US $120 m) for 117 projects
1990-1992: RM 449.74 m (US $180 m) for 203 projects

COMPUTERISATION PROJECTS (1993)

Immigration Department
Malaysia Development Bank
Customs Department
Polis
Survey Department
Accountant General
Ministry of Education
DBP
Malaysian Cooperative Bank
UTM
ITM
SIRIM
Ministry of Youth & Sports
UM
TREND

4. IT PERSONNEL

1966 Establishment of the Systems Analyst Scheme of Service

1972 - 1992

<table>
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<tr>
<th>YEAR</th>
<th>SA</th>
<th>Prog</th>
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<td>1972</td>
<td>43</td>
<td>34</td>
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<td>75</td>
<td>128</td>
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<td>1984</td>
<td>265</td>
<td>292</td>
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<td>1986</td>
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<td>1987</td>
<td>289</td>
<td>320</td>
<td>609</td>
</tr>
<tr>
<td>1989</td>
<td>880</td>
<td>198</td>
<td>1693</td>
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<tr>
<td>1992</td>
<td>840</td>
<td>935</td>
<td>1775</td>
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1992 852,000 public sector personnel
4,405 IT personnel
840 System Analysts
935 Programmers
788 Computer Operators
1,842 Data Entry Operators
5. STRUCTURE

1957 Establishment of the Malaysian Computer Society

1970 Establishment of Inter-Agency Sub-Committee on Automatic Data Processing (ICDAU)

1976 Establishment of Electronic Data Processing Committee (JPDO)

1981 Establishment of Computer Training Centre, at INTAN

1985 Establishment of NCDP (National Committee on Data Processing) and its 3 working committees:
   - Administrative Implementation Committee (JPP)
   - Technical Committee (JOT)
   - Training Committee (JLP)

1988 Formation of NCCIT (National Consultative Committee on IT)

1990 Establishment of EDI Steering Committee
   Establishment of SITTDEC

1993 Establishment of NCIT (National Council on IT)
B. CURRENT IT FOCUS

MISSION OF IT DEVELOPMENT IN THE PUBLIC SECTOR

- Encourage DEVELOPMENT & APPLICATION OF IT in the public service to improve INDIVIDUAL PERFORMANCE in organisation and to increase CAPACITY OF GOVERNMENT AGENCIES in offering services and information to the public

OBJECTIVES:

Enhance managerial effectiveness

Improve productivity of Government operational functions

Promote availability and accessibility of information

Develop IT infrastructure

Assist in creating an information-rich society
MAJOR TRENDS OF GOVERNMENT AGENCIES COMPUTERISATION (1993)

1. Client-Server Technology
2. Networking System
3. Downsizing
4. Electronic Counter
5. Image Processing
6. Open system
CURRENT IT FOCUS

1. APPLICATIONS

Applications are Classified into Sectors:
- Trade/Industry
- Security
- Administrative/Finance
- Land/Agriculture
- Education/Social

- Business Registration Information Systems
- Company Registration Information Systems
- Geographical Information systems
- Meteorological Telecommunications Network
- Vehicle Registration
- Road Tax Renewal
- Drivers Licence
EXAMPLES OF APPLICATIONS FOR SECURITY (1991 - 1993)

- On-line Payment System (Traffic COPS)
- Societies Registration System
- High Security Card System

EXAMPLES OF APPLICATIONS FOR ADMINISTRATION/FINANCE (1991 - 1993)

- National Budget Evaluation/Formulation
- Financial Information System
- Tax and Revenue Analysis System
- A-G Communications Network System
- Financial & Account management System
EXAMPLES OF APPLICATIONS FOR LAND/AGRICULTURE (1991 - 1993)

- Land Registration
- GIS
- Fast Mapping System
- Hydrology Information System


- Teachers Information System
- Examination Processing
- University Entries
- Teaching-Learning
- Health Information System
- Student Information System
- Supercomputer Center for R & D
- Computerised Library System
- Health Management Information System
- Patient Administration System
CURRENT IT FOCUS

2. STANDARDS DEVELOPMENT

Data Exchange
Open System
Security
EDI
System Development Methodology
Government Data Network
Procurement procedures
CURRENT IT FOCUS

DATABASE DEVELOPMENT

a. SITTDEC

(South Investment, Trade & Technology Data Exchange Centre)

Established in 1990

Data bank investment, trade and technology in developing nations

b. MASTIC

(Malaysian Science & Technology information Centre)

Project launched in 1990

National focal point for collection and dissemination of information on science and technology
c. **CSL**  
(Civil Service Link)

Set up and implementation in 1994

Information centre for acquiring, organising and making available on requests, information pertaining to various aspects of public service administration and information on how the general public can deal with the public sector.

d. **SIRIMLINK**

Information related to technology and its development such as standards specifications, procedures on quality assurance and patents, etc.

Applications databases include Malaysian Standards; Technical Abstracts; Malaysian Patents; Malaysian Scientists and technologists; SIRIM Products.
CURRENT IT FOCUS

4. TELECOMMUNICATIONS

EXISTING

MAYPAC
JARING
PSN

ESTABLISHMENT OF GOVERNMENT DATA NETWORK

GITN

(Government Integrated Telecommunications Network)

For better management of government departmental networks to promote both inter connectivity and cost-effectiveness in utilising these networks

Integrated voice, data and image transfer

Foundation to establish a government information infrastructure

Communications needs of government agencies
CURRENT IT FOCUS

6. COMPUTER SECURITY

A study to assess the current and required level of computer security in Government computer installations
CURRENT IT FOCUS

IT HUMAN RESOURCES DEVELOPMENT

Focus on:

» future manpower requirements and expertise
» collaborative training efforts between industry, government, and universities
CURRENT IT FOCUS

7. PROMOTING IT AWARENESS

Developing a Malaysian Society appreciative and knowledgeable in the use of IT
C. FUTURE

1. INFRASTRUCTURE DEVELOPMENT
   - IT MASTER PLAN
   - IS INFRASTRUCTURE

2. TOP MANAGEMENT COMMITMENT

3. IT STRUCTURE AT ALL LEVELS OF ORGANISATIONS

4. HUMAN RESOURCE MANAGEMENT

5. MONITORING/EVALUATION MECHANISM
IMPROVEMENT IN NATIONAL DEVELOPMENT THROUGH IT (For effectiveness):

a. Information Rich

b. IT Vision

IMPROVEMENT IN GOVERNMENT MACHINERY THROUGH IT (For efficiency):

a. Paperless Bureaucracy

b. Downsizing the public service

OTHERS

1. Specialised networking

2. Co-existence

3. Variety of Network Services
<table>
<thead>
<tr>
<th>TECHNICAL REQUIREMENTS</th>
<th>INITIALLY</th>
<th>MEDIUM TERM</th>
<th>MEDIUM TO LONG TERM</th>
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<tr>
<td>A PACKET SWITCHED NETWORK</td>
<td>- DIGITAL TRUNK LINKS</td>
<td>- INCREASE USES OF DIGITAL SERVICES FOR LOCAL LINKS</td>
<td>- REPLACE WITH FRAME RELAY TECHNOLOGIES</td>
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<tr>
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<td>- ANALOGUE LINKS AS LOCAL LOOPS</td>
<td></td>
<td>USE ISDN FOR VOICE AND DATA SERVICE</td>
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<td>USE HIGH BANDWIDTH SERVICES FOR FULL INTEGRATION OF VOICE, DATA AND IMAGE (E.G. ATM)</td>
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MASTIC

POLICY DEVELOPMENT & MONITORING
- Cabinet committees
- EPU
- Chief Scientist
- MOSTE
- MITI
- Min. of Agriculture
- Min. of Human Resources
- Min. of Education
- etc.

FORMAL EDUCATION AND TRAINING
- Secondary education institutes
- Tertiary education institutes
- Technical training bodies
- Training facilities within industry
- etc.

COMMERCIALISATION AGENCIES
- Min. of Domestic Trade
- Banks
- SIDRIM
- MITI
- MTDC
- FMM & Industry Reps.
- Private industries (including SMIs)
- etc.

ADDITIONAL GROUPS
- Overseas trade missions
- International organisations
- Science Centres
- Technology Parks
- Academic groups
- etc.

POLICY ADMINISTRATION
- MPKSN secretariat
- Other grant & Incentive admin organisations
- Revenue authorities
- SIRIM
- Research Councils
- etc.

MANAGEMENT OF RESEARCH & TECHNOLOGY
- FIRM
- RRIM
- SIRIM
- Universities
- Private sector researchers
- NGO's
- etc.

CLIENTS OF MASTIC

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GITN - WHAT FORM SHOULD IT TAKE?

SCHEMATIC OVERVIEW

- Bridge, as required

- Non Mandatory
- Bridges Required