

JAPAN INTERNATIONAL COOPERATION AGENCY(JICA)
THE MINISTRY OF ENERGY, COMMUNICATIONS AND MULTIMEDIA

THE STUDY ON ENHANCEMENT OF INFO-COMMUNICATIONS ACCESS IN RURAL COMMUNITIES IN MALAYSIA

FINAL REPORT VOL.2 : MAIN REPORT



March 2003

NIPPON KOEI CO., LTD.
INFOCOM RESEARCH, INC.

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FINAL REPORT

COMPOSITION OF REPORTS

- VOLUME 1 SUMMARY**
- VOLUME 2 MAIN REPORT**
- VOLUME 3 SUPPORTING REPORT**
- VOLUME 4 DATA BOOK**

<p>Exchange Rate US\$1.00 = RM3.80=JPY120 (As of February 2003)</p>
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PREFACE

In response to a request from the Government of Malaysia, the Government of Japan decided to conduct a study on Enhancement of Info-communications Access in Rural Communities in Malaysia and entrusted the study to the Japan International Cooperation Agency.

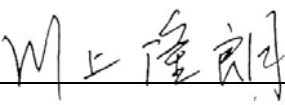
JICA selected and dispatched a study team headed by Mr. Akagawa Masatoshi of Nippon Koei Co., Ltd. to Malaysia, four times between January and December 2002. In addition, JICA set up an Advisory Committee chaired by Mr. Miyashita Takashi of the Ministry of Public Management, Home Affairs, Posts and Telecommunications between January 2002 and March 2003, which examined the Study from specialist and technical points of view.

The team held a series of discussions with the officials concerned of the Government of Malaysia and conducted field surveys at the study area. Upon returning to Japan, the team conducted further studies and prepared this final report.

I hope that this report will contribute to the promotion of this project and to the enhancement of friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of Malaysia for their close cooperation extended to the study.

March 2003

A handwritten signature in black ink, consisting of stylized Japanese characters, is written above a horizontal line.

Kawakami Takao

President

Japan International Cooperation Agency

March, 2003

Mr. Takao Kawakami
President
Japan International Cooperation Agency
Tokyo, Japan

Subject: Letter of Transmittal

Dear Sir,

We are pleased to submit herewith the Final Report of "The Study on Enhancement of Info-Communications Access in Rural Communities in Malaysia". This study was conducted by, Nippon Koei Co., Ltd. in association with Infocom Research, Inc., under the contract with JICA, during the period from January 2002 to March 2003. The report consists of Summary, Main Report, Supporting Report, and Data Book.

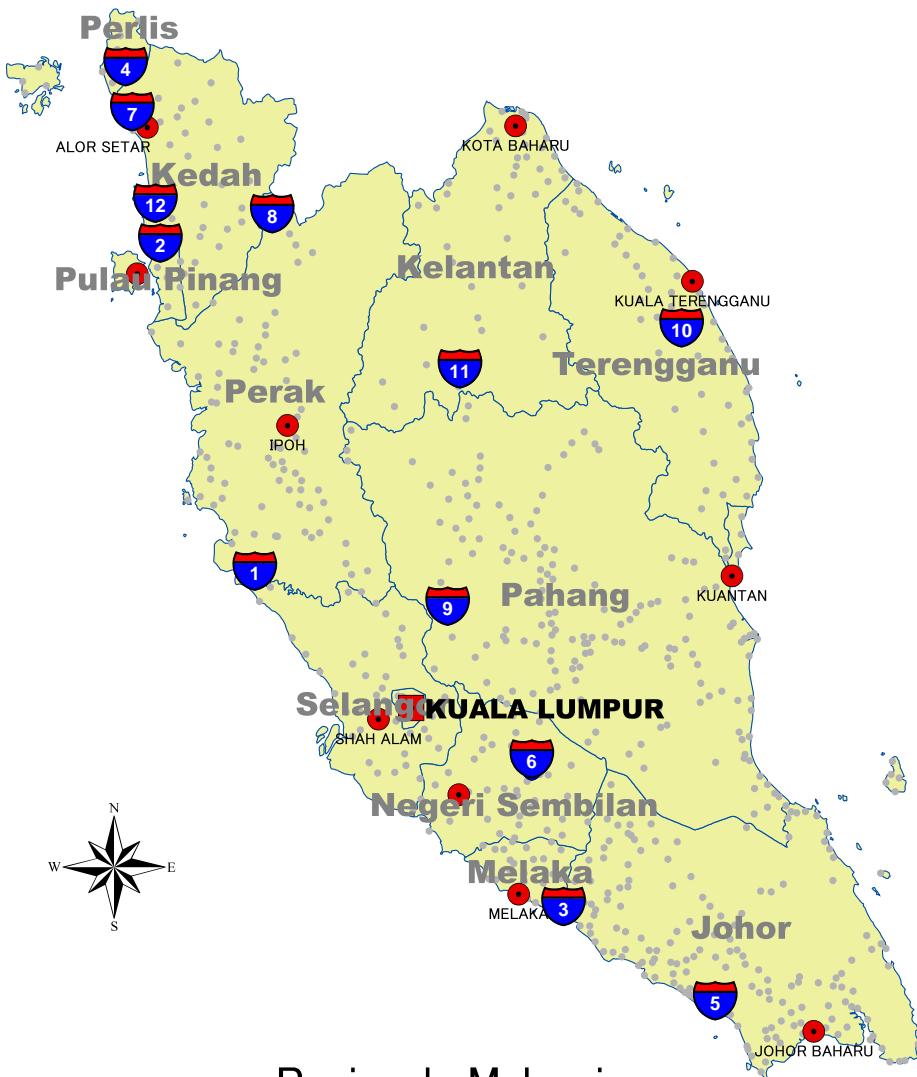
The report presents the Action Plan for the effective implementation of the Rural Internet Program (RIP) in Malaysia, which reflects the results of review on the current situation related to the enhancement of info-communications access in the rural communities in Malaysia and the other advanced countries as well as the feedback from the model projects implemented in the Study.

We would like to take this opportunity to express our sincere gratitude to your Agency, the Ministry of Foreign Affairs, Ministry of Public Management, Home Affairs, Posts and Telecommunications. We are also most grateful for the cooperation and assistance from the officials concerned in Malaysia, the JICA Malaysia office, and the Embassy of Japan in Malaysia. The Final Report is a fruit of excellent collaboration of all participants in this study.

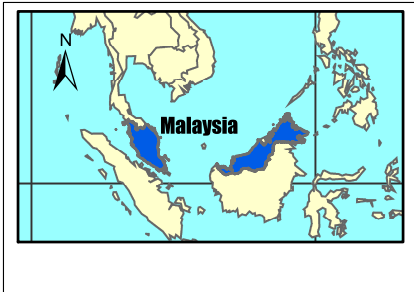
Yours Faithfully,



Masatoshi Akagawa
Team Leader, JICA Study Team
The Study on Enhancement of Info-Communications Access in
Rural Communities in Malaysia

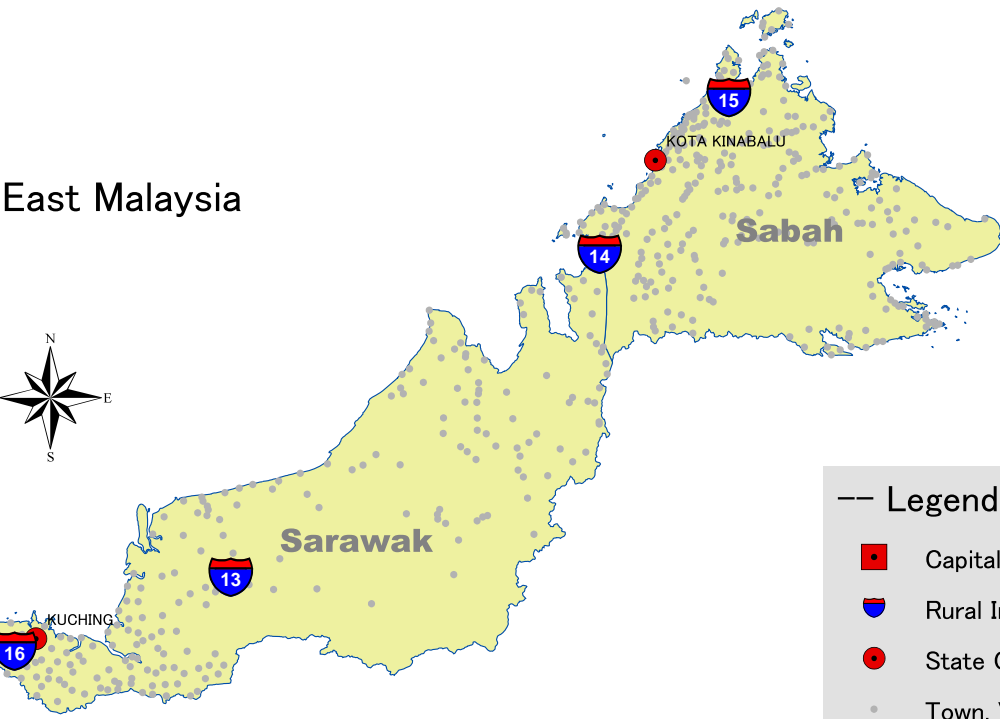


Peninsula Malaysia



- <Existing RIC>
- 1: Sungai Air Tawar
 - 2: Kepala Batas
 - 3: Sungai Rambai
 - 4: Mata Ayer
 - 5: Benut
 - 6: Batu Kikir
 - 7: Kubang Pasu
 - 8: Pengkalan Hulu
 - 9: Lurah Bilut
 - 10: Ajil
 - 11: Gua Musang
 - 12: Merbok
 - 13: Kanowit
 - 14: Sipitang

- <New RIC>
- 15: Kota Marudu
 - 16: Bau



East Malaysia



--- Legend ---

- Capital
- Rural Internet Center
- State Capital
- Town, Village
- Administration

Location Map of Study Area

**THE STUDY
ON
ENHANCEMENT OF INFO-COMMUNICATIONS
ACCESS IN RURAL COMMUNITIES
IN MALAYSIA**

**FINAL REPORT
MAIN REPORT**

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APPENDICES

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ABBREVIATIONS

ADSL	: Asymmetric Digital Subscriber Line
APDIP	: Asia-Pacific Development Information Programme
ASP	: Active Server Pages
AVR	: Automatic Voltage Regulator
BBS	: bulletin board system
BEV	: Blacksburg Electronic Village
BOT	: Build-Operate-Transfer
BPPB	: Development, Privatization and Supply Division
C&M	: Communication and Multimedia
CCK	: Complementary Code Keying
CDMA	: Code Division Multiple Access
CDMA FWA	: Code Division Multiple Access Fixed Wireless Access
CD-R/RW	: Compact Disc - Recordable/ReWritble
CD-ROM	: Compact Disc – Read Only Memory
CGI	: Common Gateway Interface
CIO	: Chief Information Officer
CMA	: Communications and Multimedia Act
CMD	: Communications and Multimedia Division
COM	: Component Program
CPU	: Central Processing Unit
DAGS	: Demonstrator Application Grants Scheme
DHCP	: Dynamic Host Configuration Protocol
DLL	: Dynamic Link Library
DO	: District Office/Officer
DOS	: Disk Operating System
DOS	: Department of Statistics
DSL	: Digital Subscriber Line
DTTB	: Digital Cable TV
E-BP	: e-Bario Project
EC	: Electronic Commerce
ELFL	: e-Learning for Life
EPU	: Economic Planning Unit
FD	: Floppy Disk
FDI	: Foreign Direct Investment
FID	: Framework for Industry Development
FTP	: File Transfer Protocol
FTTH	: Fiber To The Home
GB	: Giga Bite

GDW	: Gerakan Desa Wawasan (Village Vision Movement in English)
GHz	: Giga-Hertz
GNP	: Gross National Product
HD	: Hard Disc
HP	: Home Page
HTML	: Hyper Text Markup Language
ICT	: Information and Communication Technology
IEEE	: Institute of Electronic and Electronics Engineers
IIS	: Internet Information Server
INFRA	: Institute for Rural Advancement
INTAN	: National Institute for Public Administration
IP	: Internet Protocol
ISAC	: IT Skill Assessment and Certification
ISDN	: Integrated Services Digital Network
ISP	: Internet Service Provider
IT	: Information Technology
JICA	: Japan International Cooperation Agency
JKKK	: Jawatankuasa Keselamatan dan Kemajuan Kampung (Village Security and Development Committee in English)
JKTPID	: PID Technical Committee
JPPID	: PID Steering Committee
JPY	: Japanese Yen
KB	: Kilo Bite
Kbps	: Kilo-bits per second
KL	: Kuala Lumpur
KPLB	: Kementerian Pembangunan Luar Bandar (Ministry of Rural Development in English)
KW	: Kilo-Watt
LAN	: Local Area Network
LCD	: Liquid Crystal Display
MANPU	: Malaysian Administrative Modernization and Management Planning Unit
MB	: Mega Byte(s)
Mbps	: Mega-bits per second
MCMC	: Malaysian Communications and Multimedia Commission
MDC	: Multimedia Development Corporation
MECM	: Ministry of Energy, Communications and Multimedia
MID	: Medan Info-Desa
MIMOS	: Malaysian Institute of Microelectronic Systems
MIU	: Mobile Internet Unit

MNCC	: Gabungan Komputer Nasional Malaysia
MODEM	: Modulator-demodulator
MOE	: Ministry of Education
MORD	: Ministry of Rural Development
MRD	: Ministry of Rural Development
MS	: Microsoft
MSC	: Multimedia Super Corridor
MTBF	: Mean Time Between Failures
MTM	: Mouse Training Module
MTS	: Microsoft Transaction Server
MTTR	: Mean Time To Repair
NGO	: Non Governmental Organization
NPO	: Non Profit Organization
O&M	: Operation and Management
OJT	: On the Job Training
OPP	: Outline Perspective Plan
OS	: Operating System
PC	: Personal Computer
PID	: Program Info-Desa
POS	: Pos Malaysia Berhad
PSK	: Phrase Shift
PTA	: Parent Teacher Association
R&D	: Research & Development
RAM	: Random Access Memory
RIC	: Rural Internet Center
RIP	: Rural Internet Program
RM	: Ringgit Malaysia
SC	: Steering Committee
SEM	: Self Examination Module
SMTP	: Simple Mail Transfer Protocol
SNMP	: Simple Network Management Protocol
STCD	: Self Tutorial Compact Disc
STD	: Standard
STIC	: Strategic Thrust Implementation Committee
STM	: Self Training Module
TM	: Telecom Malaysia
TTM	: Typing Training Module
TV	: Television
UNDP	: United Nations Development Programme
UNIMAS	: Universti Malaysia Sarawak

UPS	: Uninterruptible Power Supply
URL	: Universal Resource Locator
US/USA	: United States of America
USB	: Universal Serial Bus
USO	: Universal Service Obligation
USP	: Universal Service Provision
VB	: Visual Basic
VBA	: Visual Basic for Applications
VCD	: Video Compact Disc
VSAT	: Very Small Aperture Terminal
WG	: Working Group
WID	: Web Info-Desa
WLL	: Wireless Local Loop
W/S	: Workshop
WS	: Workshop
WWW	: World Wide Web
XDE	: eXtended Development Environment