

PART IV :
ACTION PLAN
FOR THE REVITALIZATION
AND EXPANSION OF
THE RURAL INTERNET PROGRAM

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CHAPTER 1 TARGET YEAR AND COMPOSITION OF THE ACTION PLAN

1.1 Target Year for the Action Plan

The Action Plan will be formulated for the effective implementation of RIP. Target year of the Action Plan should be the ending year of RIP, i.e., 2008.

1.2 Composition of the Action Plan and Phasing Strategy for RIP

(1) Composition of the Action Plan

Composition of the Action Plan should be as follows:

- Determination of the scale of RIP (Number of RICs)
- Selection of the site and building for RIC
- Site location and building where RIC should be established.
- Planning for the telecommunication Infrastructure equipment to be installed in RIC and operation and maintenance thereof.
- Development and updating of Web contents
- IT training program and publicizing plan
- Operation and management plan for RIP/RIC- .
- Promotion measures for RIC activities
- Monitoring program for the use of RIC
- Implementation schedule for RIP
- Cost estimation and cost bearing for RIP
- Assessment of the contribution of RIP to bridging the digital divide- .

(2) Two Phase Strategy

In order to adapt to the rapid change of the external environment surrounding RIP including the progress of the IT technology, economic growth and introduction of IT infrastructure equipment into the rural communities, a two phase strategy is recommended. Namely:

- Phase 1: 2003~2005
- Phase 2: 2006~2008

Year 2005 corresponds to the mid-term review year for the current 8th Malaysia Plan while 2008 corresponds to that for the 9th Plan. In 2006, review should be carried out to assess the achievements during Phase 1 and determine the necessity and work out the appropriate RIP program for Phase 2. The review should be made considering the following aspects.

- Achievement of the objective of bridging the digital divide during Phase 1.
- Degree of satisfaction of the local communities for the functions and services provided by RIC.
- Progress in the implementation of other relevant projects under other ministries/organizations and their impacts on RIP implementation..
- Progress of communication technology and communication infrastructure in the rural area.
- Progress of the development communication technology development and communication infrastructure in the rural area.
- Socio-economic change and progress of Internet access by the households in the rural area.

The above review should be made by MECM in consultation with the community, in particular RIC Committees, and with other stakeholders including other ministries, aid organizations and private entities. Final scope and program of Phase 2 should be determined accordingly.

CHAPTER 2 SCALE OF RIP/NUMBER OF RICS

Scale of RIP or the number of RIC should be determined so that the objective of digital divide bridging of RIP should be met. Scale was determined based on the following basic conditions.

- Setting the index for measuring the alleviation of the digital divide
 Number of the rural residents who are willing to get the opportunities and are given the opportunities for getting Internet access and for acquiring the necessary skills for using Internet. If all these residents are given the opportunities, digital divide is considered to be bridged. For RIP, this index was measured by the first time users above 17 years of age.
- The above-mentioned opportunities are given through either RIP, other projects to serve for digital divide alleviation and Internet subscription by the rural residents.

The process for the determination of the number of RIC is given hereunder.

(1) Rural Population in 2008

It is estimated that the rural population in 2008 will be about 10 million by extrapolating the 2.2% growth rate of population from 2000 to 2001.

(2) Internet Subscriber in Rural Area

It is estimated that the number of Internet subscriber in rural area in 2008 will be 1.5 million assuming that it will equal the highest recorded rate among all the states, which was in Selangor State in 2001.

(3) Contribution of Related Projects other than RIP

The following assumptions should be made to estimate the contribution of other projects.

- Enrollment ratio for primary and secondary education should reach 100% by 2008. The Computer Laboratory project by the Ministry of Education should cover all the primary and secondary schools by 2008. Consequently, the age group of 7 to 17 years will be afforded Internet access through the project by 2008. Since the age group below 10 years old is excluded from the target group of RIP, the age group below 18, is not needed to be accommodated by RIP for digital divide bridging.
- The 214 thousand rural people will be covered by the Info-Desa project by the Ministry of Rural Development, and 203 thousand of them will be covered by the

Universal Service Provision project of MECM. All of those people will bridge the digital divide.

(4) Rural Population to be served by RIP (Beneficiaries)

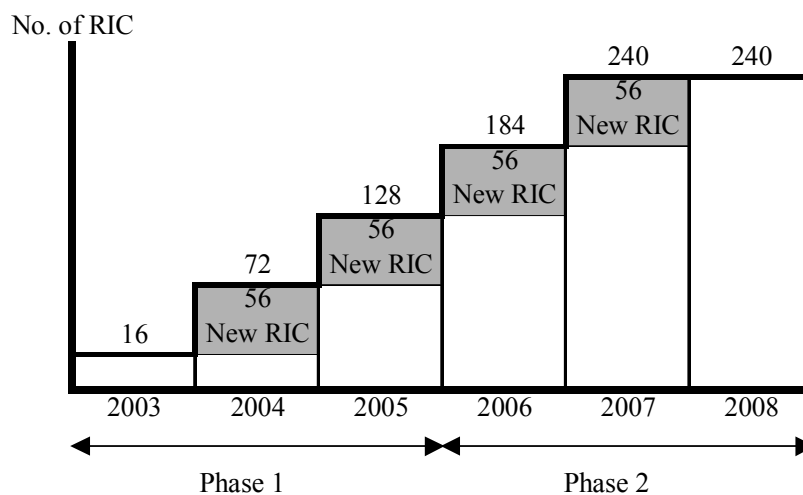
Deducting the population who can afford the Internet access opportunities through either Internet subscription or by other projects from the total rural population, the remaining rural population is estimated at 4 million. Of this remaining rural population, about 40.9% are the people who have no experience using the Internet but are willing to use the Internet based on the demand survey in the Study covering 16 rural communities. Namely, about 1.7 million people remain to be served by RIP. These people are the target group for bridging the digital divide (beneficiaries).

(5) Number of RIC

For the estimation of the number of RIC to cover the beneficiaries above, the following assumptions were made, and the user data obtained by the Model Project implementation were applied.

- Number of RIC to be established in one year should be the same during the implementation period.
- For all RIC, a two year period of operation should be secured as the minimum, specifically, establishment should be started at 2003 and completed in 2006.
- Five PCs will be installed in each RIC, which will be open for five days of operation each week, and will offer two days of IT training and 1.1 person/day/PC for first time users above 17 years of age.

Accordingly, 240 RIC should be established in total including the existing 16 RICs for covering a population of 1.7 million, assuming that 56 new RICs will be established in each year during the next four years.



(6) RIC Allocation for States

RIC allocation for the states is made so that one RIC is in each Federal territory, namely three RICs are in the three places since there is low-income housing area there, and the remaining 237 RICs are allocated according to the rural population ratio. The number of RIC to be established in the states and the federal territories is listed below.

RIC Allocation for States

State	Population 2000			No. of RIC		
	Urban	Rural	Total	Total	Existing	To be Established
Johor	1,638,772	926,929	2,565,701	26	1	25
Kedah	608,696	963,411	1,572,107	27	2	25
Kelantan	431,861	857,338	1,289,199	24	1	23
Melaka	405,917	196,950	602,867	6	1	5
Negeri Sembilan	456,535	373,545	830,080	10	1	9
Pahang	518,176	713,000	1,231,176	20	1	19
Perak	1,207,948	822,434	2,030,382	23	1	22
Perlis	67,080	131,255	198,335	4	1	3
Pulau Pinang	974,779	250,722	1,225,501	7	1	6
Selangor	3,483,765	463,762	3,947,527	13	1	12
Terengganu	434,270	445,421	879,691	12	1	11
Sabah	1,182,890	1,266,499	2,449,389	35	2	33
Sarawak	963,232	1,049,384	2,012,616	29	2	27
(Federal Territory)						
Kuala Lumpur	1,297,526	0	1,297,526	1		1
Putrajaya				1		1
Labuan	54,162	16,355	70,517	1		1
Total	13,725,609	8,477,005	22,202,614	240	16	224

CHAPTER 3 SELECTION OF SITES AND ESTABLISHMENT OF RICS

3.1 Selection of RIC Sites

The 240 RICS should be established including 224 new RICS and 16 existing RICS for bridging the digital divide. Sites should meet the following conditions, taking into account the experience of the model project implementation.

- i) Selection Criteria 1: Sites should be located in rural but not remote rural areas.
- ii) Selection Criteria 2: MECM's criteria, which were determined before the establishment of the pilot RIC should be applied. Namely:
 - Population density should be less than 57 persons per km².
 - Average monthly household income should be less than RM1,500.
 - Telecommunication facility is available.
- iii) Selection Criteria 3: Transport access to the site should not be difficult. Namely, the site should be able to be accessed by public transport including bus and taxi service.
- iv) Selection Criteria 4: Willingness and capability of the Local Authority/community for the establishment and operation of RIC should be assured.
- v) Selection Criteria 5: In order to enhance the info-communications access evenly, other relevant projects with similar objectives and functions, should not be in operation in its vicinity, considering the policy of EPU.

3.2 Establishment of RICS

Based on the experience of the model project implementation and the requirements and requests of the community people for RIC, the most appropriate type of building/facility for establishing RIC is an expanded post office with separate annex because:

- i) Post offices have already been sited at good locations that have easy transport access by the community.
- ii) People frequently visit the post offices, on an average of once a month, and can easily find RIC. Therefore, smaller publicizing activity is required than would be for other facilities.
- iii) Community people have a sense of affinity to the Post Office. Grown-up people, or the target group, feel free to enter the space without hesitation.
- iv) MECM is the supervising ministry of the Pos Malaysia and has a good relationship with Pos Malaysia which is the owner and administrator of the post offices.

- v) All the 14 on-going pilot RIC were set up at the post offices and Pos Malaysia has experience with the management of RIC.
- vi) If an annex is constructed for the RIC it may be opened after the business hours of the post office and on Saturdays and Sundays by means of an agreement among MECM, Pos Malaysia, RIC Committee and District Office.
- vii) The annex should have adequate space to house 4 to 5 PC/Internet connections and accommodate IT training activities as well.
- viii) There are 224 post offices in rural areas that can accommodate RIC.

Therefore, an expanded post office type RIC should be established wherever the expansion is possible.

In case that post office expansion is not possible, the RIC site should be selected among the following options. Final selection and formulation of RIC depends on the site condition and cooperation with the concerned parties.

(1) Original post office option

Though there exist some limitations, RIC set up occupying a corner of the post office can be one option in case post office can not be expanded, as proven in the Sg. Air Tawar model project, with the activation of the RIC Committee and upgraded RIC services including IT training and local homepage, an original post office type can play a certain role for info-communications access enhancement.

(2) District Office option

In the Kota Marudu model project, a sub-station was set up in the District Office. The number of users per PC/Internet was second after the post office among the 3 stations. As is the case for the post office, district offices are established in locations with good transport access. Community people, in particular grown-up people, frequently visit the district office and come to know of the existence and services of the RIC. If enough space is found, a district office can be an option for RIC.

(3) Civic Center/Community Hall option

If enough space is found, a civic center can be another site option for an RIC as proven by the Bau model. It is noted, however, that relative to the post office and district office, visits are not frequent and the civic center is not as familiar to the community people as the post office or district office is. Therefore intensive publicizing activities

are required to get RIC users. Though there are many community halls in the rural areas in the country, normally one hall per one village, it should be carefully reviewed to determine if the community hall can attract an adequate number of users, including those living outside of the village where the RIC is located.

(4) Library option

Considering the achievements of the library sub-station in the Kota Marudu model project, libraries can also be an option for an RIC site. However, the following aspects should be taken into account when this option is considered.

- Not as familiar a place for the grown-up people, who are the primary target group for RIC, compared with the post office.
- Users are required to keep quiet and do not feel free to talk with friends while using PC/Internet and hesitate to ask for instructions from a supervisor.

(5) LAN/Multi-station option

This option should be adopted for the sites with the following conditions.

- Adequate space can not be obtained in a single building/facility.
- Instead, a number of public buildings, which are located close each other, are available and they together can provide adequate space for the RIC.
- Installation of additional telephone lines is not possible or takes a long time.

Under the above site condition, a wireless router system should be constructed to connect the RIC stations as was successfully implemented in the Kota Marudu model. Considering the high communication speed and relatively high cost of the system, a high-speed telecommunication facility for Internet access should be adopted, including leased line and broadband in the future.

This option should be adapted in the community with the following conditions.

- Community people have relatively high IT literacy and relatively high level requirement for Internet use.
- Users of each station have a need to share information/data in the LAN.

This option can also be a model to adapt to the advanced IT environment expected in the future. For example, a laptop PC equipped with a mobile LAN card can get Internet access through the wireless router system.

(6) Other options

Though not yet verified through the model projects, schools could be another option for RIC sites. But similar to the library option, the following aspects should be taken into account if this option is considered.

- Schools may not be an easy place for the grown-up people to enter.
- Users must lower their voice during school hours.
- MOE already has large-scale Computer Laboratory and Smart School projects for info-communications access enhancement for the target group of the students of the primary and secondary schools. Coordination between MECM and MOE would be necessary.

CHAPTER 4 DEVELOPMENT PLAN OF TELECOMMUNICATION INFRASTRUCTURE / FACILITY AND O&M PLAN

4.1 Development of Telecommunication Infrastructure / Facility

(1) Communication infrastructure

A telephone line (single line, single PC) is recommended in the communication lines of RIC up to 2005 based on the following reasons.

Evaluation for Each Internet Access Line

	Conclusion	Account and Applicable Conditions
Shared with telephone (Multiple PCs with single line)	Conditionally recommendable	The most familiar type at the cyber-cafes in Malaysia. Communication performance has proven successful through the model project experiment. However, when two-sets of PC make simultaneous access to the Internet, a general display speed of HP (Yahoo! etc.) becomes more than 8 seconds and therefore this type can not be recommended for RIC where simultaneous Internet access happens frequently.
Telephone (single line, single PC)	<u>Recommendable</u>	A performance has proved successful through the implementation of the model projects. Also about 70 percent of the model RIC users were satisfied with the Internet access speed.
CDMA FWA	Conditionally recommendable	This facility is not fit for uploading the Web contents since the speed is very slow. Installation of only CDMA FWA at RIC is not recommended. However, its installation as an auxiliary means in the area where getting new fixed telephone lines is not possible or takes too long, is worth consideration.
ISDN	Not recommendable	At present, ISDN is available only in urban area and the number of lines was very small, less than 30,000 whereas the number of the fixed lines was 4,700,000 in Malaysia at the end of 2001. Since big spread cannot be expected from now on, either, ISDN is not recommended. Considering cost effectiveness, skipping this technology and waiting for the spread of ADSL technology is recommendable.
Leased line	Conditionally recommendable	Not recommendable, as long as the cost of current leased line continues. Leased line is superior to the other options in all aspects including high access speed with high users' satisfaction level, as well as stability. A plan encouraging diffusion of Flat Rate Connection Line with low price is desirous for adopting this type for RIP.
Leased line through wireless router	Conditionally recommendable	This system is effective when only one building can not house necessary equipment for RIC but multiple buildings can offer adequate space as a whole. However, total cost of leased line and wireless router system is much higher than the other options, high level users' requirement and need for sharing data might be essential conditions.
Leased line through relay	Conditionally recommendable	In order to expand the geographical coverage of a RIC, this type may be effective. However, similar conditions as for the above "Leased line through wireless router" apply to justify the adoption of this type.

To avoid lightning damage, it is recommended that protection equipment should be installed at RIC including lightning rod and UPS (Uninterrupted power supply).

(2) System configuration

Devices to be installed in RIC will include PCs and computer peripheral equipment. Use of a scanner and a digital camera is effective to produce the regional visual information and is recommended to be among the devices. Two PCs are installed in the existing pilot RICs and three to five in the Model Projects. According to the user survey by interview and questionnaire, two PCs are not enough and five PCs are enough. It seems effective for improvement of Internet access to establish more RICs with fewer PCs. A comparative cost estimation was done for the case of three PCs and five PCs in a RIC with a prerequisite of ensuring the same number of users. The cost with the case of three PCs is 1.5 times as much as with the case of five PCs because there is greater manpower cost in the case of more RICs with more supervisors. Consequently it is recommended that five PCs should be installed in RIC considering user's opinion, cost comparison and utilization ratio.

RIC facility and devices can be illustrated as given below.

RIC Layout

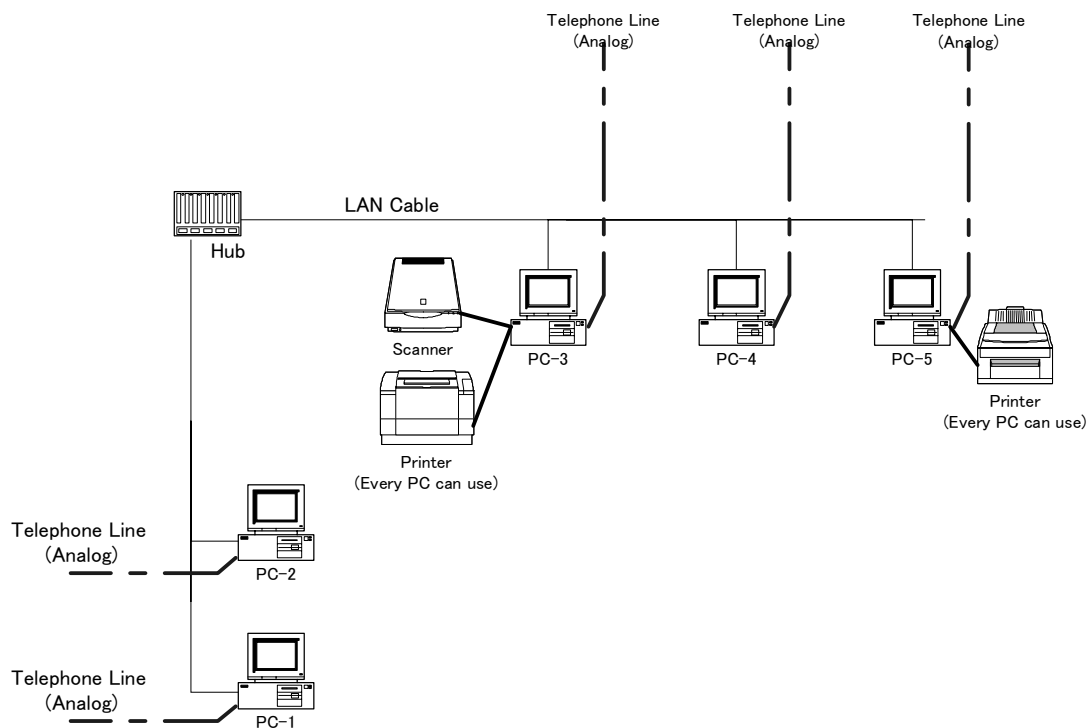


Figure IV.4.1: Proposed RIC Facility and Devices

(3) Computer specification and equipment

PCs to be placed in RIC should meet the following specifications to be able to update a homepage.

Main computer specification

Hardware	Software
CPU : Pentium4 1.8GHz	WindowsXP
RAM : 256MB	OfficeXP
HD : 40GB	Norton Antivirus
CD-R/RW (1 for each site)	Self Tutorial
FD	
LAN card	
Modem card	
USB port × 4	

Other PC Peripherals

Name	Quantity	Memo
Printer	2	
Scanner	1	
Digital camera	1	
UPS	5	Each PC
Hub	1	

In order to keep the devices in good condition, building structure should assure that no rainwater enter the RIC space and fluctuation of temperature and humidity should be within permissible range.

(4) Other Possible Types

In case suitable public buildings are available, a RIC with main and sub-stations can be set up with the primary objective of expanding the Internet access capacity and extending usable hours of RIC. Besides, if a local area network (LAN) is established connecting these stations, they can share the same information without going through Internet.

The network construction with wireless LAN is paid attention as worldwide movement. The reason is that it has the following merits as compared with a cable network.

- Low construction cost.
- Relatively quick maintenance is possible.
- Change of network composition is easy.

- Therefore a Local Area Network (LAN) by means of wireless routers will be developed for RIC on the condition that:
 - Suitable public building/facility are located nearby.
 - Undisturbed view can be obtained between the buildings to guarantee the transmission of the wave.

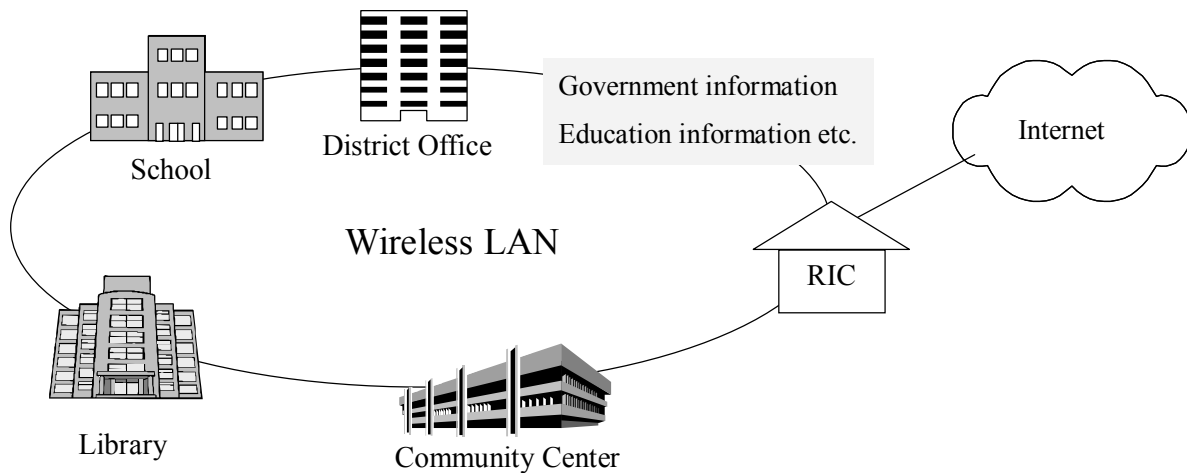


Figure IV.4.2 Illustration for Wireless LAN

Another merit of wireless LAN is that in case the installation of additional telephone lines are difficult or takes long time, wireless router system can be quick counter-measures to provide Internet access if distance between the RIC stations is within one kilometer.

At present and in short-term, basically the wireless IP router with the similar specifications and capacity as IEEE802.11b (2.4 GHz Unlicensed Band) can be assumed to be used. It is desirable for a wireless IP router to satisfy the following specifications.

SPECIFICATIONS <Wireless IP router>

Radio Part	Modulation Techniques	DSSS (Direct Spread Spectrum System)
	Frequency	2.4GHz Band
	Channel	13ch
	Antenna Power	10mW/MHz
	Transmission Rate	11Mbps
	Base Band Modulation	PSK or CCK
	Distance	1km
	Interface	10/100BASE-T (RJ45)
LAN Part	Interface Transmission Protocols	Ethernet/IEEE802.3
	Routing Protocols	RIPv2
	Power	AC240V
Others	Temperature conditions	-10~50 (Degree Celsius)
	Electric power	10W 15VA
	IP allocation	DHCP(dynamic host configuration protocol)
	Management Protocols	SNMP(simple network management protocol)
	OS(Operating system)	NetBSD

Broadband such as ADSL is considered to progress rapidly in Malaysia after 2005. In this case, the area left behind broadband-ization surely comes out due to the problems as in the distance from telephone switching station. In order to bridge such digital divide, extending the range of impact on broadband by using wireless LAN is greatly efficient.

In the future, if it assumes that laptop PCs prevail in a rural district little by little, it will be possible to use Internet for free at the circumference (about 50m) of a post office installed wireless LAN type RIC as long as mobile LAN card is prepared (IEEE802.11b).

4.2 O&M Plan of Telecommunication Infrastructure and Facility

It took about ten days or more to repair computer failures while the model project was in its execution period. In such a maintenance situation, the RIC is not able to ensure smooth services. The maintenance condition to assure the smooth services with minimal interruption requires the following.

- All sites should have On Site Maintenance service.
- The repair time of system failure should be a few days.

If an additional cost is necessary for changing the maintenance contract to satisfy the above-mentioned conditions, MECM should make this cost a budget item.

The RIC facility and equipment should be well maintained to assure the provision of smooth services with minimal interruption.

The O&M shall be carried out by the RIC Committee member, Supervision and Taskforce members. It was reported that there were damages by a strike of lightning and flood. Therefore it is recommended that the equipment should be insured against natural disaster together with theft.

- Insurance for equipment
required cost for recovery or compensation for remainder of depreciation
- Compensation for data or information
compensation for recovery of damaged data

4.2.1 O&M by RIC Committee Members

RIC committee members should administer the passwords.

(1) Administration of the password

The passwords to be administrated are shown below.

- Log on TMnet password
- Password to update Kota Morudu Homepage
- Greeting Card Password

(2) Other

- Inventory management for consumables

The quantity of consumables used and stored should always be monitored and recorded in an inventory book as shown below.

Inventory Book

Date	Warehousing	Delivery	Remaining Stock Inventory	Name and Signature

4.2.2 O&M by Supervisor

The activities of the supervisor are as follows

- (1) Operation and Maintenance of the Computer systems
 - (a) Monitoring of the computer systems
 - Recording the operation time and system failures

The supervisor records the daily system operation in the operation time log as shown below.

Operation Log

Date	Power on Time	Supervisor's name and Signature. Comments	Power off time	Supervisor's name and Signature. Comments

Whenever the supervisor detects a failure, he/she should inform the contracted maintenance service company and MECM of the failure and record it in the failure log as shown below.

Failure Log

Date	Failure Detection Time	Failure event	Operator's name and Signature

(b) System failure management

The supervisor must record the date when the service company was informed and the time spent in the repair log as shown below.

Repair log

Date	Time service company informed	Time spent in repair	Supervisor's name and Signature

- Keeping repair reports

It is necessary to keep repair reports for about two years so that they will be useful for later repair work.

(2) Computer resource management

Monitoring and management of available hard disk space

File clean-up (garbage collection): It is necessary to delete useless data in files regularly.

(3) Operation and Maintenance of Network Infrastructure

Whenever a failure is detected, the contracted maintenance service company and MECM should be informed for repair and the failure should be recorded.

Failure Log

Date	Failure Detection Time	Failure event	Supervisor's name and Signature

The supervisor must record the date when the service company was informed and the time spent in repair in the repair log as shown below.

Repair log

Date	Time reported to service company	Time spent in repair	Operator's name and Signature

- Keeping repair reports

It is necessary to keep the repair reports for about two years.

(4) Maintenance of the Application Software

The application software shall be updated from time to time to expand and change software functions.

(5) Storage Management

Storage management for the CDs and manuals related to off-the-shelf software, and related to PCs and Windows shall be done.

4.2.3 Maintenance of the Homepages by Task Force Members

- i) Updating the Home pages should be carried out periodically by the taskforce members
- ii) Saving the updated data files on CDs should be carried out periodically by the taskforce members.

CHAPTER 5 DEVELOPMENT AND OPERATION OF WEB CONTENTS

5.1 Development of Web Contents for RICs

Expanding RIC programs should have their own homepages, which come from evaluation of the RIC model project. According to analysis the of website logs in the RIC model project, users had visited all the homepages.

Through the experience of model project, RIC project has not been well known among residents and also other government officials. For that reason an RIC common home page is needed. The homepage should be enhanced for publication.

Results of the needs survey and evaluation of the log analysis consistently show that residents desire local news, public news and educational information. For this reason, expanding RIC programs should have their own homepages.

Basically residents should maintain the home page and collect the material and information for their home pages. All sites have to be frequently maintained by task force members.

Contents should be useful information like educational information, local news and public news etc. Contents that involving resident activities, including a photo gallery, specialty goods and tourism are worth consideration.

Mailing lists and mail magazines also can involve residents.

Contents can play a considerable role that lets residents involve community's activities,

5.2 Available Wallpaper for RICs

The previous item can be employed to the expand the RIC site, based on available wallpaper which are background image files, page control ASP and Component programs, frames, program parts and components.

All the above mentioned, produced by JICA for the RIC model project are to be available wallpaper for expanding the RIC site.

5.3 E-Public Comments

e-Public Comments should be employed for the RIC but comments should include comments for not only the RIC but also for the district office or government worth consideration.

e-Reservation in the model project seemed to be a little early for the RIC but it would be good to examine for usage. e-Public Comments, e-Greetings, and e-Reservation employ sending mail technology of SMTP. In particular, e-Reservation uses database technology that comes with a database system. Database systems are commonly complicated systems. E-Reservation can be good wallpaper when a database system is built for the RIC. These technologies can be reutilization for other similar applications.

5.4 Links

In the model project, links covered all governmental sites, but for the expanding RIC the link should include more similar sites like governmental sites, educational sites, related site for other projects, both domestic and overseas.

CHAPTER 6 IT TRAINING AND PUBLICIZING PLAN

6.1 IT Training Plan

6.1.1 Service Policy on IT Training

The Service policy for IT-Training at the RIC is defined for the Action Plan as follows:

- i) IT Training at the RIC should give local people an introduction to PCs and remove a kind of fear of PCs.
- ii) The training should put emphasis on giving the people basic knowledge and skills in the use of PCs and information services on the Internet.
- iii) It should contribute to decreasing IT illiteracy in rural areas and to increasing the number of RIC users in the local community.

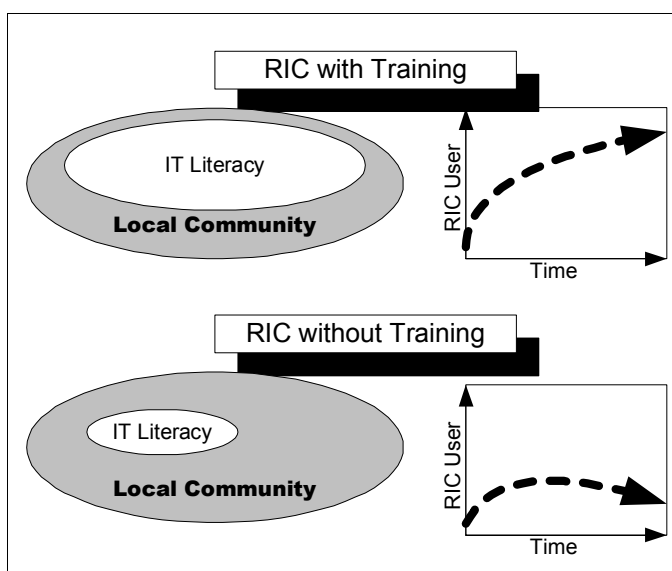


Figure IV.6.1: Expected Effect of IT Literacy With/Without Training

- iv) It should encourage people to obtain a means of direct communication with federal/state governments, private sectors and individuals through the Internet.

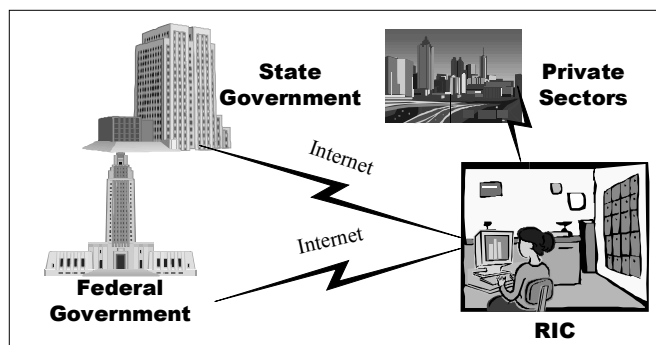


Figure IV.6.2: Destination of Info-communication from RIC Users

- v) The training, which targets RIC Committees, enables them to send local information or local product information inside or outside the community as one of the activities for rural development.

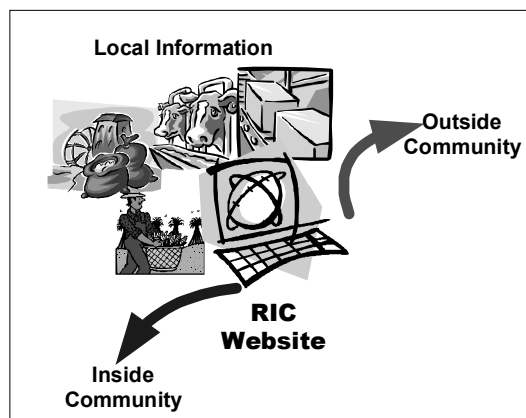


Figure IV.6.3: Information Dissemination from RIC Website

According to the service policy mentioned above, three training short courses are specified for new RICs, which will be set up by MECM in future. They are specified and based on the experiences in the model projects. They are named Course-1, Course-2 and Course-3. Details of each course are discussed below.

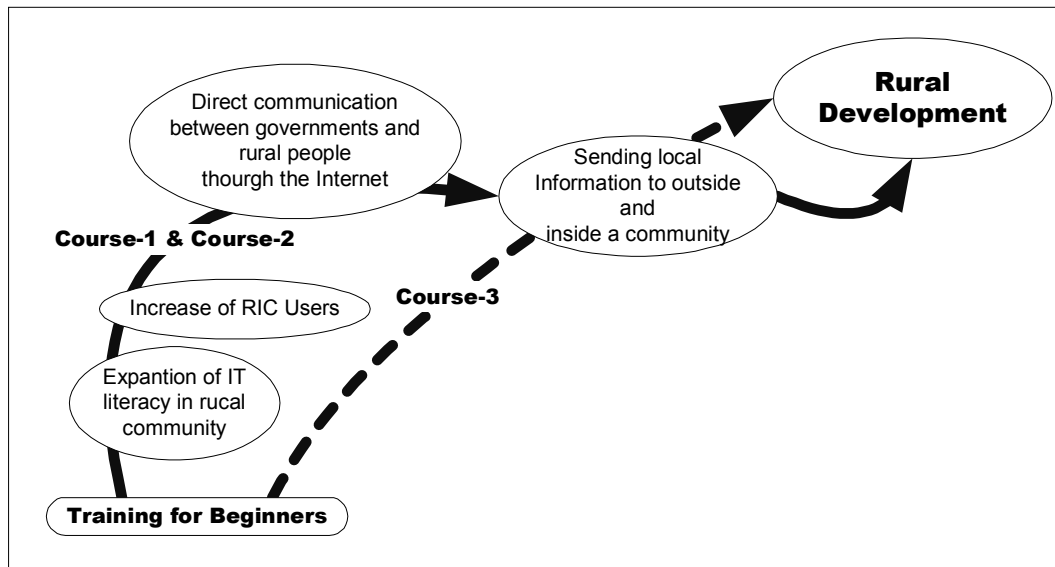


Figure IV.6.4: Process to Realize Rural Development by Training

6.1.2 Course Description

(1) Course-1, 2

(a) Specification and Time Table of Course 1

Course-1 targets PC beginners in the local community. In the course, trainees learn basic knowledge and skills to use PCs. The trainees also learn using the textbooks and the training modules developed by JICA Study Team for the Model Project. In addition, they also realize the value of PCs through the training.

The training should be financed by MECM in the first year. RIC Committees must be responsible for implementation of the course in their community.

If possible, each RIC Committee should select the candidates for the instructor from their community people.

Course-1 Specifications

Course Name	Course-1 "PC Beginner's Course"
Target Skills and Knowledge	Keyboard and Mouse Usage Basic functions of Windows To start software from Start menu To double click an icon to start a program To switch on and operate Windows OS To operate among some Windows To use icons To open and close a Window To edit a brief document To turn off a computer
Number of Sessions	104 sessions / year/RIC (2 times/week/RIC)
Venue	Rural Internet Centers
Session Duration	4 hours per session
Participation Fee	Free of charge (Financed by MECM)
Capacity	5 persons per session (maximum)
Training Staff	One instructor byMECM
Target Participant	New to PCs
Requirements for participation	To send in an application for the course
Training Material	Textbook (1): <i>Kursus Jangka Pendek Teknologi Maklumat (IT) 1 Nota Kukurs</i> Textbook (2) <i>Latihan Menggunakan Notepad</i> MTM (Mouse Training Module) in Self Tutorial CD TTM (Typing Training Module) in Self Tutorial CD

Proposed Contents and Timetable of Course-1

Standard Time (min)	Theme	Contents	Material and Tools to be used
10	(1) Orientation for the Course 1	The instructor gives participants the following instructions: 1) overview of the course 2) some instructions in the course	1) Presentation using PowerPoint with an LCD projector 2) Textbook (1)
10	(2) Background of the Rural Internet Center	The instructor gives participants the following knowledge: 1) objectives of the Rural Internet Program 2) function and services of the RIC 3) organization of the RIC	1) Presentation using PowerPoint with an LCD projector 2) Textbook (1)
15	(3) What is a PC?	The instructor gives participants the following knowledge: 1) names and functions of parts of a PC in an RIC (Display, Keyboard, Mouse, Speaker, Printer, Digital Camera, Image Scanner) In this course, the instructor doesn't teach how to use them in detail. 2) how to switch on a PC	1) Presentation using PowerPoint with an LCD projector 2) Textbook (1) 3) PCs
10	(4) What can you do with PC?	The instructor gives participants the following knowledge. 1) use value of PCs 2) things to do with PCs (word processing, tabular calculation(spreadsheets), image/photo editors)	1) Presentation using PowerPoint with an LCD projector. 2) Textbook (1)
10	(5) What is hardware/s software	The instructor gives participants the following knowledge: 1) definition and concept of hardware 2) definition and concept of software	1) Presentation using PowerPoint with an LCD projector 2) Textbook (1)
10	Rest		
45	(6) Use of the Mouse	The instructor gives participants the following knowledge: 1) how to hold a mouse 2) how to move a mouse and the mouse cursor on a Screen 3) how to use mouse buttons (Click, Drag and Drop) The trainees practice on MTM according to instructions being given by the instructor.	1) Using training module "MTM" 2) Textbook (1)
45	(7) Use of a Keyboard	The instructor gives participants following knowledge: 1) name of keys 2) function of each key 3) how to use each key The trainees practice on TTM according to instructions being given by the instructor.	1) Using training module "TTM" 2) Textbook (1)
10	Rest		
30	(8) Brief Documentation	The trainees make a brief document using "Notepad" according to the textbook (2). The trainees learn the following through this documentation work using Notepad. 1) Starting "Notepad"(Program) 2) Documentation 3) File: save rename, delete 4) Folder: make rename, delete	1) Presentation using PowerPoint with an LCD projector 2) Textbook (2)
15	(9) Question and Answer	The participants question the instructor on the contents in the course	
30	(10)Free use of PCs	The trainees freely use PCs. The instructor gives instructions if needed.	(MTM, TTM, Textbooks, etc.)

(b) Specification and Time Table of Course-2

Course-2 targets the Internet beginners in the local community. In the course, trainees learn basic knowledge, skills and usage of the Internet services that are necessary for them to become Internet service users. They also realize the use value of the Internet or information through the course.

The training should be financed by MECM in the first year. RIC Committees must be responsible for implementation of the course in their community.

If possible, each RIC Committee should select the candidates for the instructor from their community people. The instructor can hold the post of the instructor in Course-1 and Course-2.

Course-2 Specifications

Course Name	Course-2 “Internet Beginners Course”
Target Skills and Knowledge	Use of Services on the Internet How to connect a computer to the Internet Basics of Browsers (MS Internet Explorer) To start a browser from the Start menu To display homepages To change a URL address To use icons To click items on the homepage that are linked to another page Basics of Search Engines To enter the URL of a Search Engine To think of keywords to search To enter keywords to be used on a Search Engine To select useful/available homepages Basics of E-mail To get an E-mail address using a free e-mail service To login to an E-mail server To compose and send E-mail To reply to and to receive E-mail To attach files to an E-mail To manage E-mail folders Log off from an E-mail service
Number of Sessions	104 sessions/year/RIC (2times/week/RIC)
Venue	Rural Internet Center
Duration of a Session	4 hours
Participation Fee	Free of charge
Capacity	3 persons per session (maximum)
Training staff	One instructor employed by MECM
Target Participant	New to the Internet
Requirements for participation	To send in an application for the course
Training Material	Textbook : <i>Kursus Jangka Pendek Teknologi Maklumat (IT) 2 Nota Kursus</i>

Proposed Contents and Timetable of Course-2

Standard Time (min)	Theme	Contents	Material and Tools to be used
10	(1) Orientation for Course 2	The instructor gives participants the following instructions: 1) overview of the course 2) some instructions in the course	1) Presentation using PowerPoint with an LCD projector 2) Textbook
10	(2) Background of the Rural Internet Center	(Same as Course-1)	1) Presentation using PowerPoint with an LCD projector 2) Textbook
15	(3) Concepts of the Internet	The instructor gives participants basic concepts and frameworks concerning the Internet.	1) Presentation using PowerPoint with an LCD projector 2) Textbook
10	(4) What can you do on the Internet?	The instructor gives participants the following instructions: 1) available services on the Internet 2) things to do with the Internet	1) Presentation using PowerPoint with an LCD projector 2) Textbook
15	(5) How to connect a PC with the Internet	The instructor teaches participants how to connect a computer with the Internet: 1) how to dial-up 2) how to disconnect	1) Presentation using PowerPoint with an LCD projector 2) Textbook
10	Rest		
25	(6) Use of Browsers	The instructor gives participants the following instructions: 1) names of the components of a browser 2) functions of the components of a browser 3) Browser usage	1) Presentation using PowerPoint with an LCD projector 2) Textbook
25	(7) Use of Search Engines	The instructor gives participants the following instructions: 1) concepts of Search Engines 2) functions of Search Engines 3) Search Engine usage	1) Presentation using PowerPoint with an LCD projector 2) Textbook
10	Rest		
60	(8) Use of E-mail	The instructor gives participants the following instructions: 1) concepts of E-mail 2) functions of E-mail 3) The trainee gets their own E-mail addresses on a free E-mail service site. 4) E-mail usage to compose, to reply, to attach files, to arrange messages, to delete, etc	1) Presentation using PowerPoint with an LCD projector 2) Textbook
15	(9) Questions and Answers	The participants question the instructor on the items in the course.	
35	(10) Free use of the Internet	The trainees freely use the Internet or repeatedly practice the lesson. The instructor gives instruction if necessary.	1) Textbook

(c) Self-Learning

People who cannot attend the training courses for certain reasons can learn about PCs or Internet usage themselves with training material prepared at RIC. The contents of the self-learning course are the same as those of Course-1 and Course-2. In addition, the staff who are employed by MECM are requested to assist the beginners as instructors. The RIC provide textbooks and instructions on how to use the training modules. It is also recommended that the beginners come to RICs with people who have experience in using PCs or the Internet, such as friends, family, or colleagues. It is also recommended for people who have finished training courses to repeatedly practice the contents of the training courses.

However, beginners are requested to attend the training courses any way they can.

(d) Instructor in Course-1 and Course-2

MECM should employ and assign persons who can act as instructors in Course-1 and Course-2. It will be convenient for the RIC Committee to select and to recommend to MECM some candidates for the instructors in each community and to recommend to MECM.

The contents of the training courses are elementary and target only the beginners. People who have experience with PCs and the Internet can easily come to know how serve as the trainer for the short courses. The following people may be suitable as candidates for instructors.

Possible Candidates for the IT Instructor in Course-1 and Course-2

Primary or secondary school IT-related teachers
Staff working for cyber cafes
Office clerks who use PCs or the Internet in their ordinary job
RIC Committee members
Persons who have finished both short courses
A person without a regular occupation who has experience using PCs or the Internet

If it is hard for an RIC Committee to assign an instructor itself, an RIC staff member under contract with MECM can also hold the post of an instructor.

The instructors have to understand at least the following required knowledge and skills to give participants instructions in the courses.

- Contents and timetables of Course-1 and Course-2

- Contents of the textbooks for Course-1 and Course-2
- Usage of Training Modules (Mouse Training Module and Typing Training Module)
- Normal English usage
- Usage of a Word processor, Spreadsheet software and Presentation software
- Usage of a browser, search engines and E-mail

(e) Training Material

The following training material is available in Course-1 and Course-2. All were developed by the JICA Study Team.

Available Training Material

Course-1	Textbook(1): Course-1 Textbook
	Textbook(2): Using Notepad
	Mouse Training Module(MTM) and Typing Training Module(TTM)
Course-2	Textbook: Course-2 Textbook “
Self-Learning	Textbooks for Course-1 and Course-2
	Self-Tutorial CD including MTM and TTM

In the future, MECM will be requested to revise and update the training material developed by JICA Study Team based on their sources. It will also be necessary to translate the contents from “Bahasa Malaysia” into other ethnic languages.

(2) Course-3

RIC Committees are considered to be one of the most important resident groups in terms of promoting their RIC in their communities. The committees, comprised of local residents, know their own local needs better than anyone else and are expected to be the information providers for their communities. They are also expected to continue sending the local information on their RIC homepages, which target various people outside/inside, their communities.

Course-3 is a nursery for web experts for each RIC Committee. The course gives trainees the necessary knowledge and skills to develop an RIC website through practical training using software and hardware. In the training, trainees will make up their RIC websites. They will also maintain and update the contents of the RIC website through the training.

The training is divided into 3 training stages, and a total of 7 sessions are given each RIC in the first year. The instructors for the training will be from private IT consultants

(companies). Those will be duly supervised and contracted with MECM. The training will be financed by the MECM, but the Committees must be responsible for implementation.

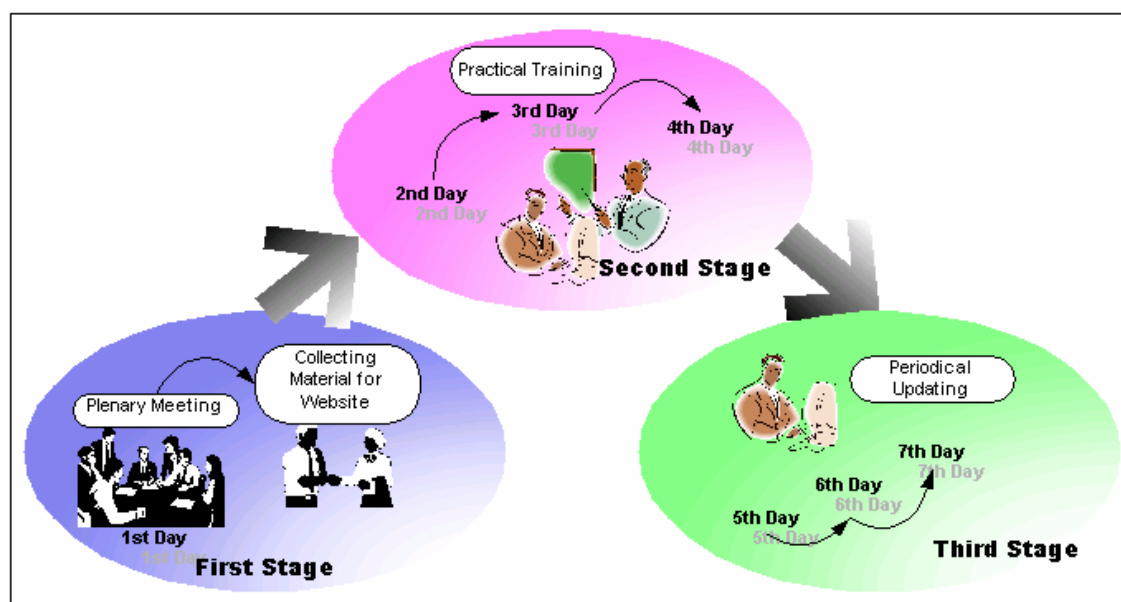


Figure IV.6.5: Overview of Course-3

Course-3 Specifications

Course Name	Course-3 “Web Expert Course”
Target Skills and Knowledge	Basic knowledge and skills to develop an RIC website
Number of Training days	7 days in the first year
Venue	Rural Internet Center
Session Duration	2 to 7 hours including lunch and short breaks
Participation Fee	Free of charge
Capacity	3 to 5 RIC Committee members:
Target Participant	1 st Day Training: All RIC Committee members 2 nd to 7 th Days Training: Members selected from the RIC Committee as web administrators
Training Material	Textbooks : (Prepared by JICA Study Team) 1) RIC Web Editing Manual 2) e-Reservation Manual 3) e-Public Comments Manual 4) e-Greetings Manual Software: 1) Microsoft FrontPage 2002 2) Adobe PhotoShop 7.0 3) Leech FTP (Windows OS Freeware)

(a) First Stage

1st Day Training

The first day training targets all members of an RIC Committee. It takes a total of 3 hours from the start to finish

Plenary Session (1 hour)

As the plenary session, an instructor gives members instructions about objectives and roles of the RIC website. And, members overlook existing RIC websites to confirm and understand their contents, information and compositions. Items of sessions are confirmed as shown below.

- Understanding objectives and roles of an RIC website
- Browsing existing contents of RIC websites
- Understanding types and structures of information of RIC websites

After the plenary session, the members discuss and decide the following management items for their RIC website.

Discussion Items (2 hours)

- Decision on policy of website management
- Decision on website administrators
- Decision of a cooperative framework for RIC website and administrators
- Decision about; target information, number of updates in a year
- Other necessary items

After the meeting, the committee members shall collect material for the RIC website for the next training day.

(b) Second Stage

*2nd Day Training :RIC Web Expert (Training Part I)**Main Training Items*

- Review of the last meeting
- Grouping/arrangement of collected material for the RIC website
- Preparation of a Web tree
- Software training (an HTML editor)
- Module training(1): e-Reservation

Proposed Time Table for 2nd Day Training

Standard Time (min)	Theme	Contents	Training Material and Tools to be used
20	(1) Review of the last session	Trainees practice and confirm the training contents given in the last session.	
40	(2) Preparatory work-1	Trainees arrange collected “undeveloped” material for RIC website and divide it into groups, according to type of information. And, trainees make up a tree-structure of the contents of the website on a paper.	
80	(3) Preparatory work-2	With the web-tree, trainees make up file-folders to save source files. They digitize pictures or photographs, and save them in the folders. The trainees learn how to use an image scanner or a digital camera and related software in this lesson.	1) Demonstration with an LCD projector
60	Lunch Break		
120	2) Editing HTML files	The trainees learn how to edit html files using an HTML editor (software) like “MS FrontPage”, according to the contents of the textbook and instructions given by the instructor. In this session, the trainees roughly complete HTML files without images or links.	1) Demonstration with an LCD projector 2) Textbook
20	Coffee Break		
40	3) Module Training (1)	The trainees learn how to use “e-Reservation” module and functions used only by the administrator. The instructor gives instructions, according to the contents of manual.	1) Demonstration with an LCD projector 2) e-Reservation Manual
20	4) Questions and Answers	Questions and Answers on the second day training.	

3rd Day Training :RIC Web Expert (Training Part II)

In the 3rd Day training, the trainees internally launch their RIC website for view only by the committee members.

Main Training Items

- Review of the last session
- Software training (image processing software)
- Arrangement of source files
- Uploading and downloading files
- Module training(2): e-Greetings

Proposed Time Table for 3rd Day Training

Standard Time (min)	Theme	Contents	Material and Tools to be used
20	(1) Review of the last session	Trainees practice and confirm the training contents given in the last session.	
120	(2) Processing image files	The trainees learn how to process scanned image files as web contents using software. The instructor gives instructions, according to the contents of textbook.	1) Demonstration with an LCD projector 2) Textbook
60	Lunch Break		
60	(3) Finalizing web Contents	The trainees arrange documents and images on HTML files, and make hyperlinks. They tentatively finalize the first edition contents of the RIC website. The instructor gives instructions, according to the contents of textbook.	1) Demonstration with an LCD projector 2) Textbook
60	(4) Uploading and downloading	The instructor gives trainees instructions how to use FTP client software. The trainees upload the files to a web server using the software. They display the contents on a browser to check results of uploading. If there are any mistakes, they must correct errors and try to upload again.	1) Demonstration with an LCD projector 2) Textbook
20	Coffee Break		
60	(5) Module Training	The trainees learn how to use “e-greetings” module and functions used only by the “administrator.” The instructor , according to the contents of manual gives the instructions.	1) Demonstration with an LCD projector 2) e-greetings manual
20	(6) Questions and Answers	Questions and Answers in the third day training.	

4th Day Training: RIC Web Expert Training (Part III)

In the 4th Day training, the trainees complete the contents of their RIC website as a first edition. And, they open their RIC website to ordinary people.

Main Training Items

- Review of the last session
- Upgrading contents of RIC website
- Uploading and downloading files
- Module training(3): e-Public Comment

Proposed Time Table for 3rd Day Training

Standard Time (min)	Theme	Contents	Material and Tools to be used
10	(1) Review of the last session	The trainees confirm training items that they learned in 2 nd day and 3 rd day training course.	
60	(2) Checking and upgrading web contents	The trainees check all contents of their RIC websites. If necessary, they revise and upgrade the contents.	1) Demonstration with an LCD projector 2) Textbook
30	(3) Opening of RIC website	The trainees send contents files to the server using FTP. Finally, they open their RIC websites.	1) Demonstration with an LCD projector 2) Textbook
20	Coffee Break		
30	(4) Module Training	The trainees learn how to use “e-public comment” module and functions used only by the administrator. The instructor, according to the contents of manual gives the instructions.	1) Demonstration with an LCD projector 2) e-Public Comment manual
20	(5) Questions and Answers	Questions and Answers in the third day training.	

(c) Third Stage

The RIC website will be updated periodically through the 5th to 7th Days training.

5th, 6th and 7th Days Training

Main Training Items

- Periodical upgrading

Proposed Time Table for 5th, 6th and 7th Days Training

Standard Time (min)	Theme	Contents	Material and Tools to be used
120	(1) Upgrading RIC website	The trainees revise and upgrade the contents of their website as periodical updating works.	Textbooks and Manuals

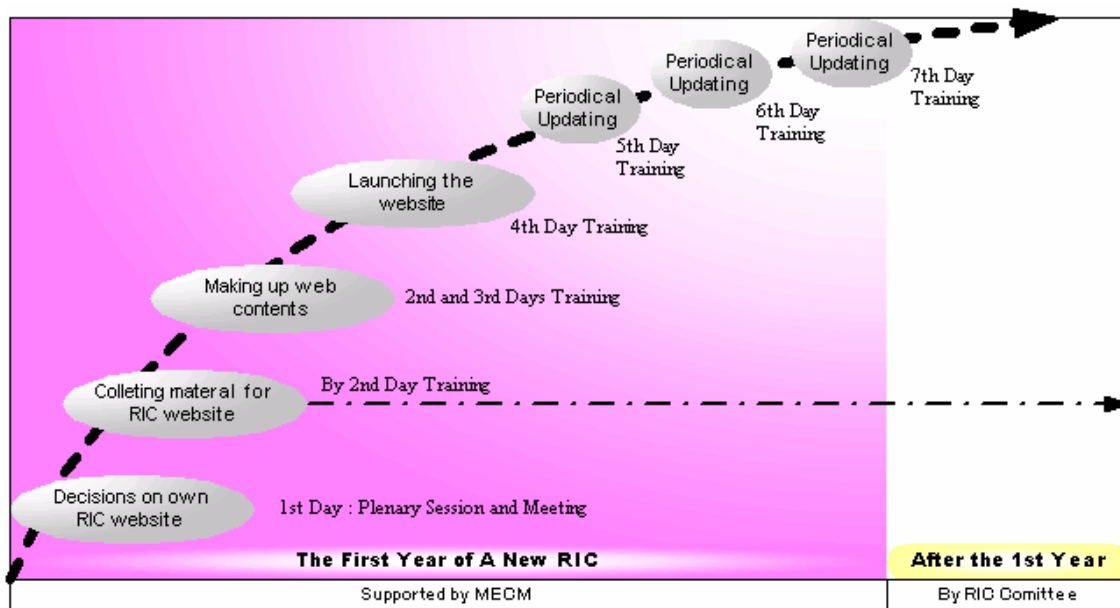


Figure IV.6.6: Development of RIC Website and Training

6.1.3 Management of Training

(1) Publicity

MECM and each RIC committee advertise the training courses in following publicity activities. These were effective in the Model Projects.

Available Publicity

Publicity	Promoter	
	MECM	RIC Committee
Free use of Training Module at events in the community or in daily operations of RIC	√	√
Display of application forms for training courses in public facilities such as district offices, post offices, community halls, schools, hospitals, etc.		√
Verbal advertising by committee members, instructors or RIC staffs in ordinary activities		√

(2) Application/ Arrangement of Applicants

As an application procedure, the following process is necessary to arrange participants in Course-1 and Course-2. This is the same as the process used in the model projects.

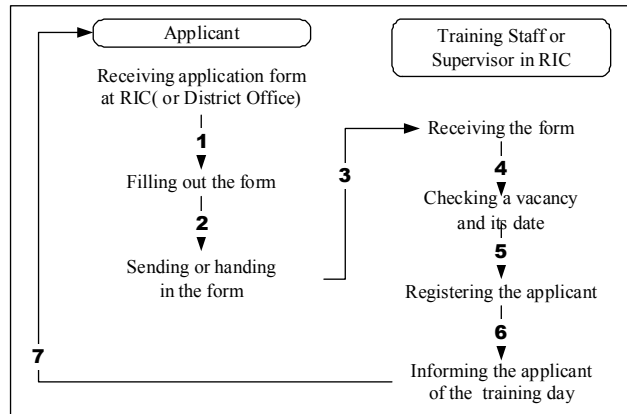


Figure IV.6.7: Flow of Application Procedure

The RIC committee prepares an adequate number of application forms and distributes them in public buildings such as district office, post offices, schools, and community centers. A sample of the forms used in the Model Project is shown below. The form is composed of items to be filled in by the applicants. Necessary items are shown in the sample.

**"Borang Pendaftaran"
Kursus Jangka Pendek IT**

Percuma

Age Gender

Nama Name Umur Jantina

Alamat Address TEL Telephone Number

Saya berminat untuk menghadiri:

Kursus I (Course I) Tandak pilihan Anda

Kursus II (Course II)

Nota(Note):

Note Request

Selection Item: Course-1 and/or Course-2

< Jadual awal untuk Kursus I dan Kursus II Teknologi Maklumat >
Jadual mungkin berubah mengikut keadaan semasa.

Training Schedule

September				
Tarikh	Hari	Kursus 1	Kursus 2	
7	Sabtu	8:30-11:30	13:30-16:30	
8	Ahad	8:30-11:30	13:30-16:30	
14	Sabtu	8:30-11:30	13:30-16:30	
15	Ahad	8:30-11:30	13:30-16:30	
21	Sabtu	8:30-11:30	13:30-16:30	
22	Ahad	8:30-11:30	13:30-16:30	
28	Sabtu	8:30-11:30	13:30-16:30	
29	Ahad	8:30-11:30	13:30-16:30	
Oktober				
Tarikh	Hari	Kursus 1	Kursus 2	
5	Sabtu	8:30-11:30	13:30-16:30	
6	Ahad	8:30-11:30	13:30-16:30	
12	Sabtu	8:30-11:30	13:30-16:30	
13	Ahad	8:30-11:30	13:30-16:30	
19	Sabtu	8:30-11:30	13:30-16:30	
20	Ahad	8:30-11:30	13:30-16:30	
26	Sabtu	8:30-11:30	13:30-16:30	
27	Ahad	8:30-11:30	13:30-16:30	
November				
Tarikh	Hari	Kursus 1	Kursus 2	
2	Sabtu	8:30-11:30	13:30-16:30	
3	Ahad	8:30-11:30	13:30-16:30	
9	Sabtu	8:30-11:30	13:30-16:30	
10	Ahad	8:30-11:30	13:30-16:30	

Figure IV.6.8: Sample of Application Form

Administrators of the public facilities will have kept the written forms until the RIC staff picks them up. The RIC staff collects written application forms at least once a week.

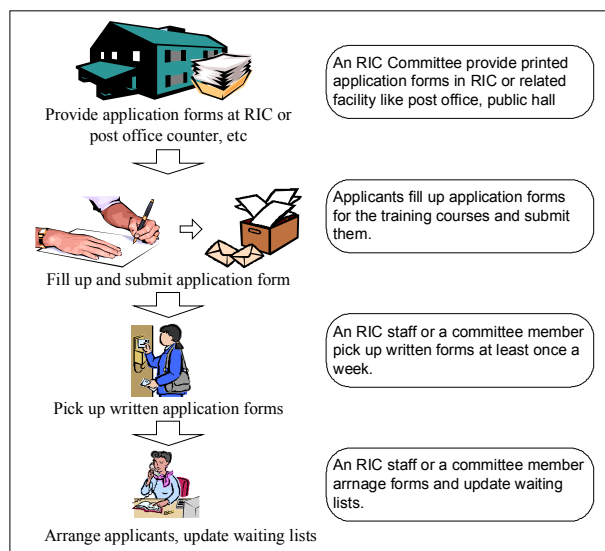


Figure IV.6.9: Arrangement by Administrator

Based on the collected forms, the RIC staff updates the waiting list of applicants for the courses.

Form of Waiting List

[Course-1 or 2]

Date of Application	Name	Address	Age	Gender	Telephone No.	Status and Training Date

The staff also arranges the applicants as participants based on the latest waiting list and training schedule.

Form of Participants List

[Course-1 or 2]

Date of Session	Name	Address	Age	Gender	Telephone No.	Status and Training Date

After the arrangements, the RIC staff calls and asks the participants to attend the courses on fixed days.

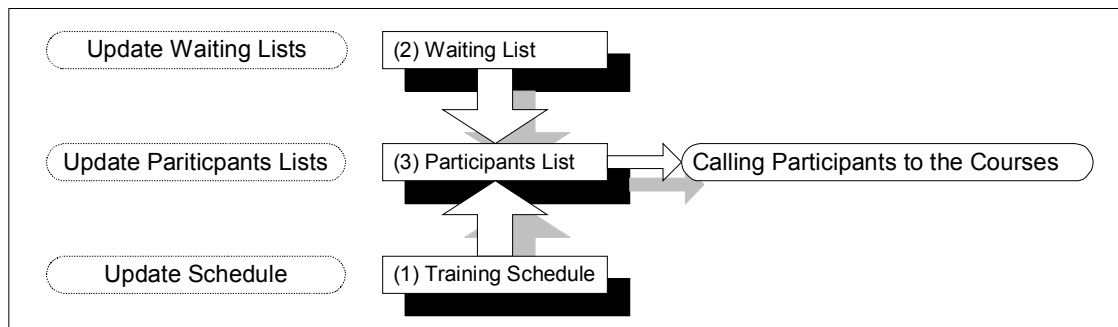


Figure IV.6.10: Arrangement of Participants using Waiting List, Training Schedule

(3) Preparation of Training Material for Each Course

Instructors and RIC staffs arrange following in preparation for each session.

• Preparation of textbooks for participants: one book per participant
• Setting of PCs to be used in the courses
• Setting of training modules
• Setting of furniture, etc.

(4) Necessary Components of Training

It is necessary to prepare and arrange the following components for IT-Training at an RIC. MECM is requested to provide a new RIC with following items and staff concerned for the IT-Training.

Items	Course-1	Course-2	Course-3
A. Hardware			
Personal Computer	√	√	√
Laser Printer			
Image Scanner			√
Digital Camera			√
B. Software			
Windows OS	√	√	√
Microsoft Internet Explorer	√	√	√
Microsoft Notepad (XP)	√		
Microsoft Word (XP)			√
Microsoft Excel			√
Microsoft PowerPoint	√	√	√
Adobe Photoshop 7.0			√
Microsoft FrontPage 2002			√
FTP Client software			√
C. Human Resources			
Instructor (A)	√	√	
Instructor (B)			√
Assistant	√	√	
D. Training Material			
Course-1 Textbook (1)	√		
Course-1 Textbook (2)	√		
Course-2 Textbook		√	
Course-3 Textbooks			√
Training Guideline	√	√	√
Self Tutorial CD	√	√	
E. Training Instruments			
Liquid Crystal Projector	√	√	√
White Board	√	√	√
Laser Pointer	√	√	√
White Board Set	√	√	√

(a) Hardware

Item	Number	Remarks
(i) Personal Computer	4	1 PC to 1 instructor 3 PCs to 3 trainees
(ii) Laser Printer	1	To print necessary documents
(iii) Image Scanner	1	To use in Course-3
(iv) Digital Camera	1	To use in Course-3

(b) Software

Item	Number	Remarks
(i) Operating System (Windows XP)	4	1 license to 1 PC
(ii) Text Editor (MS Notepad)	4	To use in Course-1
(iii) Word processor (MS Word)	4	To compose necessary documents
(iv) Spreadsheet (MS Excel)	4	To compose necessary documents To compose waiting list of applicants
(v) Presentation (MS PowerPoint)	4	To use in Course-3
(vi) Image Processing (vii) (Adobe Photoshop 7.0)	1	To use in Course-3
(viii) Homepage Editor (ix) (MS FrontPage 2000)	1	To use in Course-3
(x) FTP Client Software (xi) (Available Freeware "Leech FTP")	1	To use in Course-3

(c) Human Resources

Item	Number	Remarks
(i) Instructor (A)	1	An RIC staff or a person from community
(ii) Instructor (B)	1	From private IT consultants
(iii) Assistant	1	A temporary volunteer staff from the community

(d) Training Material

Item	Number	Remarks
(i) Course 1 Textbook (1)	150	
(ii) Course 1 Textbook (2)	150	
(iii) Course 2 Textbook	150	
(iv) Course 3 Textbooks	5	5 Copies of each
(v) Training Guidelines	3	
(vi) Self Tutorial CD(STCD)	2	Including the following modules Self Tutorial Module (STM) Mouse Training Module (MTM) Typing Training Module (TTM) Self Examination Module (SEM)

(e) Training Instruments

Item	Number	Remarks
(i) Liquid Crystal Projector	1	(depending on necessity)
(ii) White Board	1	(depending on necessity)
(iii) Laser Pointer	1	Or normal pointer
(iv) White board accessories	1	Accessories; pen and eraser

(f) Files for Management

Item	Number	Remarks
(i)Source Files of Training Material	1	Included in Self Tutorial CD

(5) Year Plan

Training programs should be carried out every year as follows.

Course-1

The number of times is 104 and the full quota of participants is 520.

Course-2

The number of times is 104 and the full quota of participants is 520.

Course-3

The number of times is 7 and the total number of participants is around 30.

6.2 Publicizing Plan**6.2.1 Publicity and Community Involvement Activities**

In order to activate an RIC, it is important to inform people of the presence of the RIC. This is obvious as shown in the needs surveys. In spite of the fact that nearly 100% of the respondents have used a post office, only slightly over 30 percent of them have known of the presence of the RIC. In order to improve such a condition, general publicity materials, such as leaflets and banners, and promoting activities such as sending letters to schools, kampongs, and local organizations are effective.

Next, in order to make the people, who have known of the presence of the RIC but are not willing to use it, more aggressive to the use the RIC, it is necessary to convey the fun and convenience of the Internet to them. To this end, events such as the Photo Contest Workshop shall be implemented.

Next, training shall be implemented for the people who want to use the RIC but do not know how to use a PC. The training course implemented in the Model Project got an extremely good reputation. In Sg. Air Tawar, about 100 middle-aged and elderly persons are waiting to attend the IT training course. This means that they can not use the RIC now because they do not know how to use a PC. Therefore, it is important to offer and publicize the training courses, in order to activate the RIC.

Given the above, it is necessary to carry out publicity activities to promote the use of the RIC and IT training courses. The RIC Committee shall plan and implement events and other activities to involve the local residents in the activities of the RIC Committee so that the local residents can use the RIC and attend the IT training courses to improve the IT literacy of their community. Also, if local residents and local organizations are involved in the activities, more information for the RIC home page will be collected. And, the information on kampongs and local organizations placed on the RIC home page can be equivalent to sending the more enriched local information. Moreover, through such events, the human resources, who are interested in RIC activities, can be discovered. And, if such human resources are added to the members of the RIC Committee, the activities of the RIC Committee can be revitalized.

The publicity activities shall be begun with an activity such as sending letters to kampongs, in addition to usual methods like leaflets and banners. It is also effective to make use of festivals and events of a community to publicize the RIC.

Target Group and Program

Target Group	Program	Items
No Willingness to Use PCs	Publicity Dissemination Awareness Raising	Introduction of the RIC Introduction of PCs & the Internet Introduction of Training Courses Events/Workshops (e.g., Photo Workshop)
Willing to Use PCs but unable	Training	Training Courses Manuals/Text Books Self-Tutorial/Self-Learning Kits
Able to use PCs	Participation in Development of Web Contents Networking/Communication through the Internet	Workshop for Collection of Local Information for Local contents Introduction for improving Internet Use Development of Web Contents RIC News Letter/Magazine Common Topic Contents
RIC Committee (Involving Local Business/Industry and Local Organizations, etc.)	Contents Maintenance Data Update	On the Job Training through developing Contents Web Training Courses Manuals/Text Books for Contents Development and Maintenance

6.2.2 Promotion of Community Participation

In the future, the RIC will be used broadly by the people of a community, and the IT literacy of the community will be improved. At such a stage, ICT (RIC) will be able to be used for the activation of the community, through the following steps.

Many people in rural communities are not IT literate. They cannot use PCs or the Internet. In this context, the RIC can provide them an opportunity to access to the Internet as the first step. Then they can participate in the Internet/virtual world and became a player there.

After the first step, they can get information by browsing web pages or receiving e-mails. This kind of one-way communication is considered as the second step. If they get knowledge and skills to send an e-mail and develop a web page, they can transmit and exchange information. This two-way communication is considered as the third step. In this step, community people can communicate with their friends through the Internet and utilize the z Internet for the activities of their community-based organizations.

If an organization develops its web page or publishes an e-mail magazine, a web page and a magazine can transmit the information and its activities, e.g. meeting schedules, and publicise it to the outside. Furthermore the members of the organization can communicate with each other by e-mail.

After that, it may become an e-community by using a mailing list system, a BBS system and an e-meeting room system, etc. This kind of communication is interactive and synergy effective.

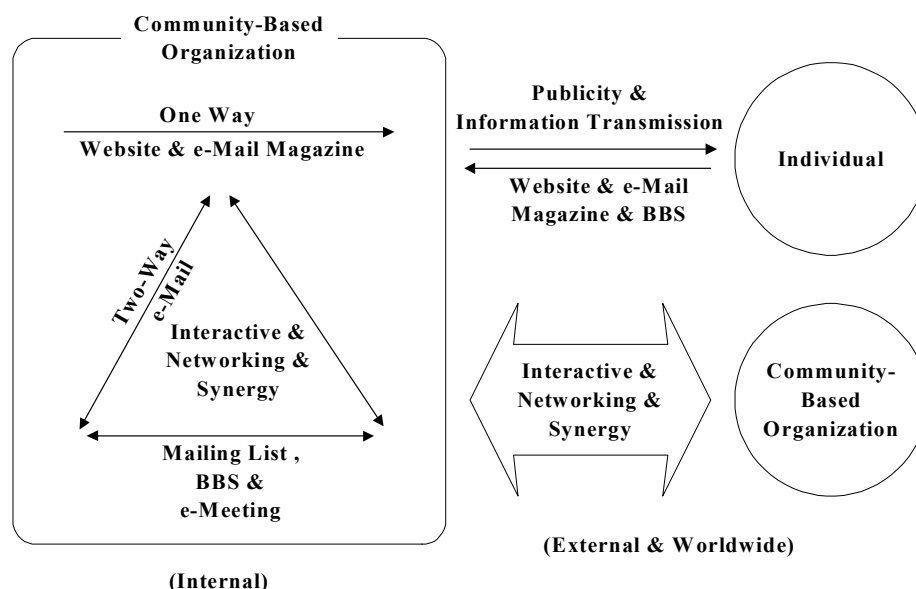
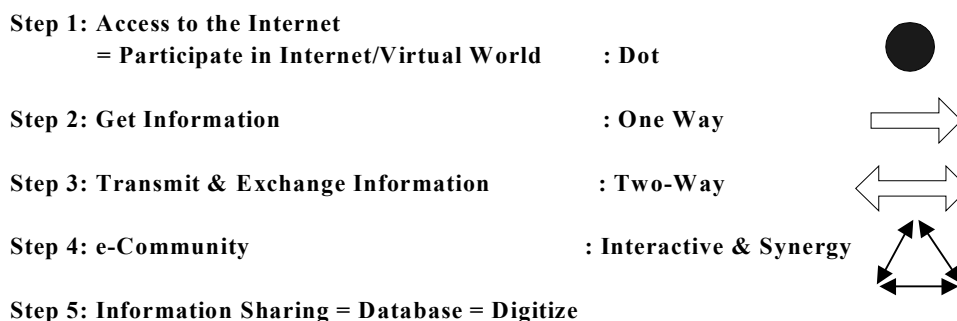


Figure IV.6.11: Community Activation Model

CHAPTER 7 OPERATION AND MANAGEMENT OF RIP/RICS

7.1 Background

7.1.1 Management in the Pilot Projects

Management is important in order that the infrastructure/facility, web and training, which are key components for an RIC, function well.

One of the reasons that the existing 14 RICs did not function well is that the management was not done well.

There are two kinds of management, one is a centralized management by MECM, and the other is site management by each RIC.

There was no governmental budget for the 14 existing RICs in the pilot stage. These were implemented with donations from the enterprises. Therefore the centralized management did not functioned well for support of the RICs at the sites in case a PC was broken down. On the other hand, the site management also did not function well because RIC Committees were not active and a postmaster, who was required to take care of the RIC, could not play the role of the site manager due to busy daily postal work.

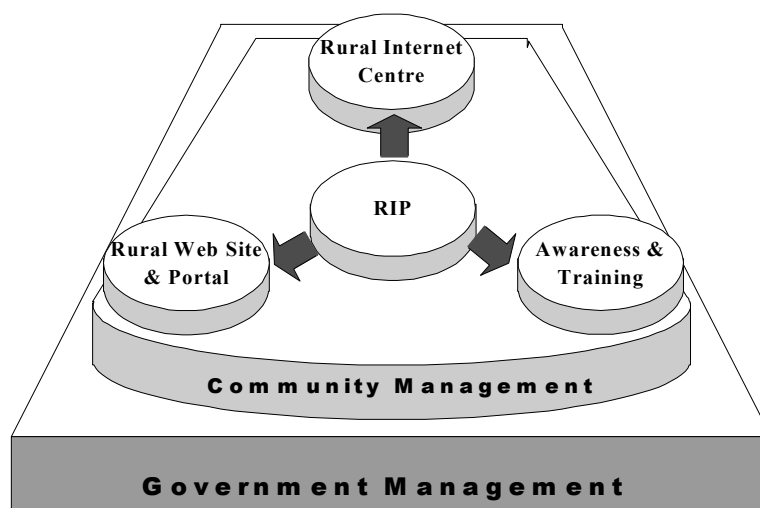


Figure IV.7.1: Outline of Management in Pilot Project

7.1.2 Management Problems in the Pilot Projects

The problems of site management in existing RICs are as follows:

- Postal staff could not play enough of a role due to a daily busy routine of post work.

- The roles of RIC Committee and the system were not established well enough to function.
- RIC Committees had not matured unless and until they understand their roles and start positive actions.
- Capacities of all the Committees had not been built to function well because the site management depended on independent actions of RIC Committees without any support from the beginning.

7.2 Organizational Framework of RIP

(1) Responsibility of MECM and Establishment of RIC Unit/Division

In order to carry out the responsibilities of MECM for RIP implementation, a Unit/Division responsible for RIP should be established within MECM. Assuming at least one site visit for every RIC in a year, 4 full-time staff are considered to be needed.

- One chief of the Unit/Division
- One telecommunications and IT expert
- One Web contents expert
- One accounting clerk

The Unit/Division should have the following responsibilities.

- i) Overall planning of RIP
- ii) Budget preparation and fund provision for RIP
- iii) To supervise the maintenance of the 2 hosting servers to be installed in MECM for the operation of RIC.
- iv) To employ and manage IT consultants/companies
- v) To assign one supervisor each for RIC for the full-time supervision of its operation.
- vi) Periodic monitoring of the performance of RIC

(2) Establishment of Supporting Committees

A Supporting Committee should be set up aiming at providing assistance to RIP and at coordinating with other relevant projects to achieve the common and ultimate goal of digital divide bridging, as given below.

- i) Chairperson should be Secretary General of MECM with Deputy Secretary General as Deputy Chairman.
- ii) Members should include the representatives of EPU, MORD, MOE, INTAN, State Governments and Telekom Malaysia and Pos Malaysia besides MECM.
- iii) Concerned aid organizations, e.g. JICA and UNDP, etc., may be invited as observers.
- iv) Meetings will be held annually around the end of the year and when needs arise.

7.3 Management of RICs

Direct supervision of RIC operation should be made by the supervisor employed by MECM. It is recommended that rules should be made for the proper and efficient use of RIC in line with the objective of RIP, including prohibition on the improper use, maximum hour for use and a priority order among the users. Rules should be decided through the discussion and agreement between MECM and RIC Committees. Enforcement should be done by the full-time supervisors.

The duties of the supervisor are as follows.

- Start up and shut down of .equipment
- Checking of OS and applications, etc.
- Supervision of RIC use including illegal use
- Informing the maintenance company in case of troubles with equipment or communications lines
- Instruction for proper use of RIC and priority use for the target group
- Instruction on PC and Internet use for beginners
- Monitoring of RIC usage and report to MECM and RIC Committee

Major tasks for the RIC Committee/Task Force should comprise:

- Organizing various events for promoting RIC use and community participation including workshops, Web browsing contests, photo contests, etc.
- Collection of relevant information/data and updating the local homepage.
- Publicizing the RIC and its activities.
- Discussing the solutions for the problems occurring in association with the operation of the RIC and measures to strengthening the activities of the RIC.

- Taking on board the needs of the community and formulation of the draft annual plan for RIC services for the subsequent year and submission thereof to MECM.

To fulfill these tasks, it is necessary that the RIC Committee should assume the distinctive functions at the same time. Namely:

- Official and authorization function with regard to the operation of RIC representing or on behalf of the local authority.
- Voluntary task force function to carry out RIC activities.

To carry out the dual functions, the RIC Committee should include representatives of the Local Authority, community-based organizations and people interested in RIC activities. The Task Force should comprise people eagerly interested in RIC activities. The younger generation and the people with relatively high IT literacy should be included in both the RIC Committee and the Task Force. More specifically, the following members should be included:

- District Officer or his/her deputies
- Representatives of the Departments of the District Office including those for agriculture, health, education, industry and commerce.
- Representatives of the primary and secondary schools
- Post office master
- School teachers
- PTA
- Representatives of the community-based associations including Youth Unions, Women's Unions and agricultural associations.
- Owners/Managers of the local industries

The RIC Committee should have the following posts:

- Chairman
- Deputy Chairman
- Secretary
- Accountant

Selection/appointment of the RIC Committee members should be as follows.

- At the time of the establishment of a new RIC, either MECM or the District Office calls a meeting for establishing an RIC Committee, inviting the concerned people.

- In this meeting, RIC Committee members should be agreed upon including the Chairman.
- A members list should be sent to MECM and District Office/State Government for consent.
- At the beginning of the fiscal year, an RIC Committee meeting should be held to confirm the membership. A new member list, regardless of whether or not there is any change, should be sent to MECM and District Office/State Government for consent.
- In case there arises the need to change or add new members to the RIC Committee, the Chairman can make a decision and report it to MECM and the District Office/State Government.

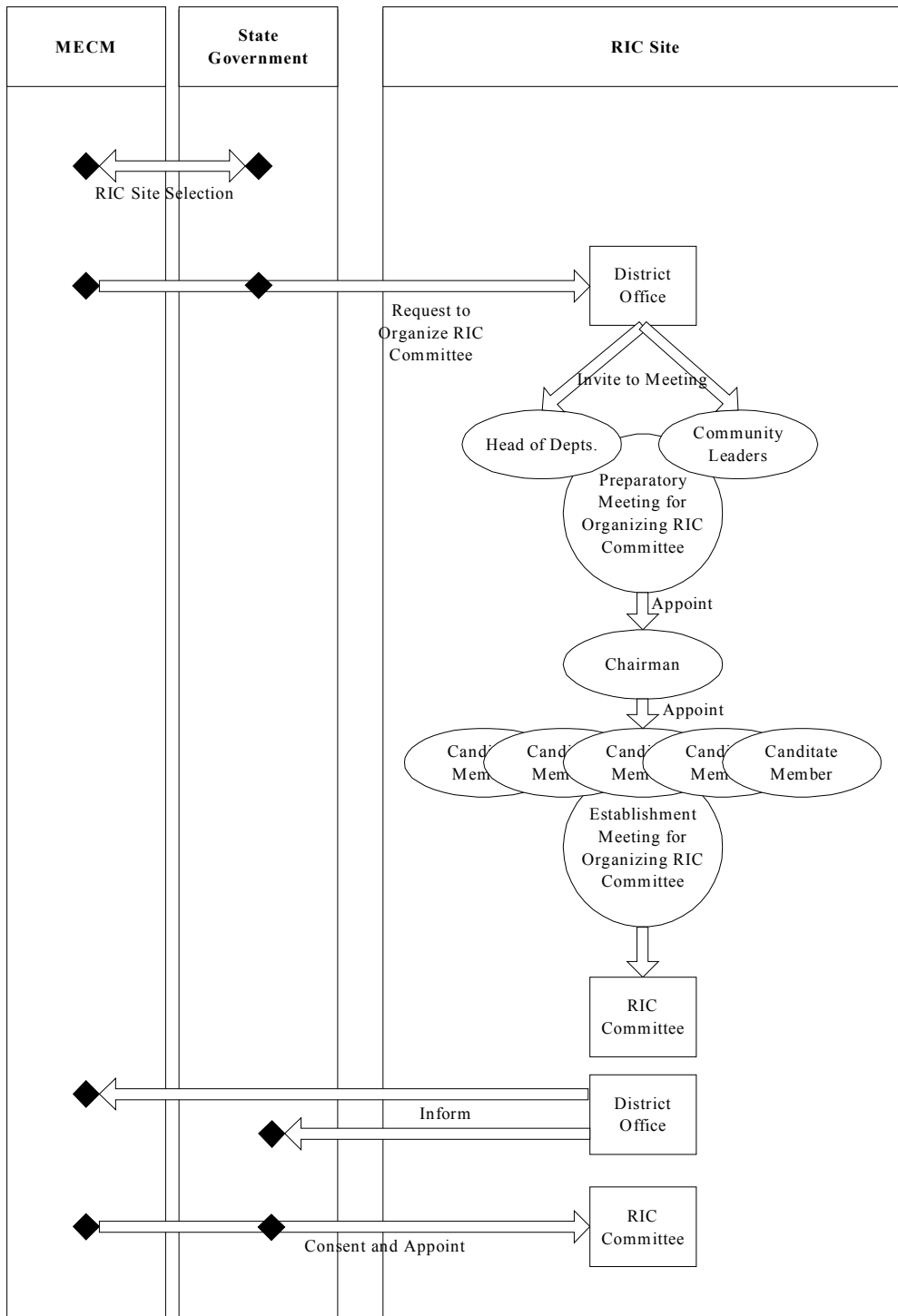


Figure IV.7.2: Outline of Procedure for Organizing RIC Committee

The agenda for a RIC Committee meeting should include the followings.

- (1) Experience Sharing

Experiences, which are the activities since the last meeting, should be shared among the members even if a member could not attend an activity. It also helps to look back.

For example, a member who attended reports on the opening ceremony, photo contest workshop and task force training should share his knowledge.

(2) Report of Monitoring Results

The supervisor shall report the monitoring results. The report should include good points, achieved points, and problematic points of the results of the monitoring activities.

(3) Report on the IT Training Course

The trainer or the supervisor shall make a report on the training courses. The report should include the results, the conditions of applications, the problematic points, etc.

(4) Web Contents

A member of the Task Force shall report on the condition of the Web contents. The report should include the current condition and the contents updated from the last meeting. Next, the members of the RIC Committee shall discuss the contents that they want to add or update, while at the same time the data collected.

(5) Problems

Define the problematic points to work out solutions.

(6) Actions to be taken

Exchange opinions on what the RIC Committee should do in the future and consider concrete actions.

(7) Next Actions and Schedule

At the end of the meeting, confirm the concrete actions emerging at each section, their schedules and the respective members in charge for those actions.

7.4 Manpower Development for RIC Management

During the period of the Model Project, from the initial stage of the establishment of the RIC Committees, the members of the RIC Committees could not fully understand what RIC is and what they should do. However, while accumulating the experiences in activities and meetings after RICs were established, the members have come to gradually understand what RIC is and

what they should do. Finally, they have come to be able to find out and implement what they want to do.

However, it is impossible to completely understand and act from the beginning. Therefore, in the Model Project, the Study Team facilitated the RIC Committees to raise problems so that the members of the Committees could gradually find out and discuss problems at their meetings. However, there were some cases where the RIC Committee could not make final and clear decisions on who would do what, when, and how, by the end of a meeting. In those cases, the Study Team played the role of the facilitator to finally confirm the details of discussions so that concrete actions could be decided.

Consequently, it can be said that support by the facilitator is important until an RIC Committee becomes mature enough to independently manage itself.

Especially, the members of an RIC Committee can not fully understand what RIC is and what they should do in the initial stage of the establishment of the Committee.

Given this, the initial stage shall be deemed as the Take-Off Run (preparatory) period for the self-management by an RIC Committee. And, MECM shall hire a consultant playing the role of the facilitator to support the RIC Committee from behind.

In principle, the consultant shall attend the monthly regular meetings to facilitate and encourage the RIC Committee.

The consultant shall support the RIC Committee from behind as the facilitator for about one and half year, until the RIC Committee can independently manage itself. If the time when the consultant can judge that the RIC Committee can independently manage itself comes, the consultant shall reduce the frequency of attendance to the meetings, gradually. (ex. He can reduce the frequency of attendance from every two meetings to every three meetings.) And, after the RIC Committee comes to be able to independently manage itself, the consultant shall attend the regular meetings once a year. A consultant specializing in community participation and with field experience in rural areas is desirable.

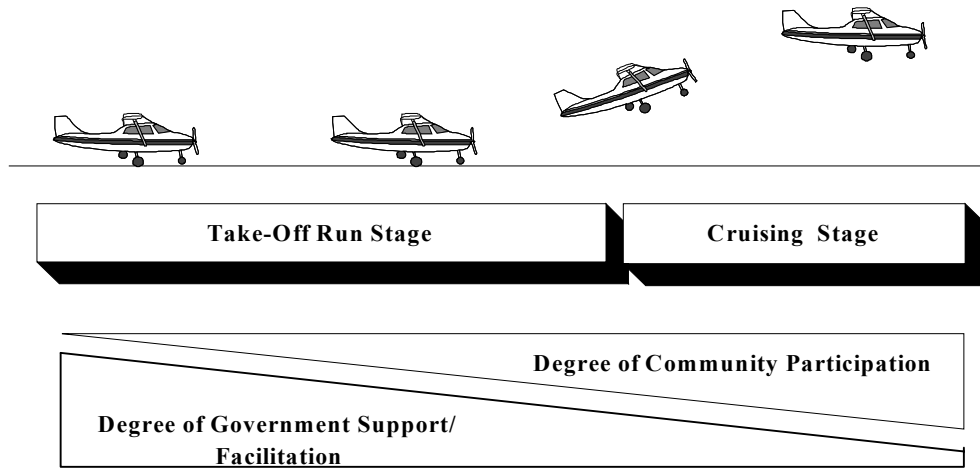


Figure IV.7.3: Future Development Process of RIC

CHAPTER 8 INSTITUTIONAL MEASURES FOR RIP/RIC PROMOTION AND SOCIAL CONSIDERATION

The following institutional measures recommended to be taken for supporting RIC activities. With a view to strengthening the motivation of the RIC users, examination system is recommended to be established. Certification system for RIC Instructor is also recommended to be established with a view to bringing up manpower with relatively high IT skill in the community. The RIC Instructor should be allowed to teach the community people and work as instructor for the IT training courses on compensation. Since MECM is not a body responsible to provide these systems, appropriate Government institution should be consulted by MECM to make necessary arrangements.

- i) An examination system to assess the skill level of the RIC users should be established by an appropriate Government institution with the arrangement of MECM.
- ii) A certification system for RIC Instructor should be established by an appropriate Government institution with the arrangement of MECM.

It is necessary for the target group to promote the RIC use for the information poor. The promotion for women should be emphasized more because many women are information poor. A women's day should be held once a month due to promote priority use for women. A woman's trainer should be assigned for women's course because it is comfortable for women if a trainer is female. In addition, an elderly day, in which priority use is given to elderly people, should also be held for elderly people who tend to be information poor. A training course for elderly people should also be organised.

CHAPTER 9 MONITORING OF THE PERFORMANCE AND USE

In order to get feedback to the improvement of operation and management, data for the performance and use of RIC should be obtained through observation as well as the questionnaire survey for the RIC users and participants of IT training. Supervisors should assume the role of a monitoring staff and report to MECM. Monitoring data should include:

- Number of RIC users and their attributes
- Frequency of browsing the local homepages
- Frequency of using software applications
- Internet access speed by kind of telecommunication infrastructure
- Occurrence of mechanical troubles and repair for PC and other equipment and facilities
- Number of participants for the IT beginner courses and degree of acquiring skills
- Number of participants for the IT intermediate course for homepage updating and number of people who have acquired the skills
- Activity level of RIC Committees/Task Force, publicizing of RIC and community involvement
- Satisfaction of the users and IT training participants with regard to:
 - RIC space, number of PCs
 - Internet access speed
 - Business hours of the RIC
 - Contents of the local homepage
 - Level, frequency, duration and materials used in IT training

CHAPTER 10 IMPLEMENTATION SCHEDULE OF RIP

RIP will consist of 240 RICs to be established by 2006 and a management organisation in MECM. 240 RICs are divided into three types.

- Existing pilot RICs: 13 sites
- Model RICs: 3 sites
- New RICs: 224 sites

RIP should be implemented according to the following courses, and then the schedule is planned based on that.

- Existing pilot RICs should be revitalised and new RICs should be established on the example of the three model RICs, which have been completed successfully and are continuously managed with collaboration from MECM and RIC Committee.
- Year 2003, as a first year of full-scale implementation of RIP, should focus on revitalising of existing pilot RICs, and new RICs should not be established.
- An operation to establish new RICs will start from 2004, and a selection of sites and facilities, and tender preparation should be done within 2003.
- The same number (56) of new RICs should be established every year during four years from 2003 to 2006 considering the capacity of RIP unit newly established in MECM and ensuring at least two years operation of each RIC.

The implementation schedule is shown below.

Implementation Schedule of RIP

	Work Items	2002	2003	2004	2005	2006	2007	2008
1	13 Pilot projects							
1.1	Repairing of the existing facility/equipment	■						
1.2	Installation of new equipment	■						
1.3	Assigning a full-time supervisor	■						
1.4	Strengthening of RIC Committee activities	■						
1.5	Development/updating of local homepages		■	■	■	■	■	■
1.6	Provision of IT training (Beginners course and intermediate course)		■	■	■	■	■	■
1.7	Provision of services		■	■	■	■	■	■
1.8	Management and maintenance		■	■	■	■	■	■
2	3 Model projects							
2.1	Strengthening of management by RIC		■	■	■	■	■	■
2.2	Provision of IT training and service		■	■	■	■	■	■
2.3	Management and maintenance		■	■	■	■	■	■
3	Establishment and Operation of 56 New							
3.1	Selection and formulation of RIC		■	■	■	■		
3.2	Establishment of RIC Committee		■	■	■	■		
3.3	Procurement of facility/equipment		■	■	■	■		
3.4	Development/updating of local homepages		■	■	■	■	■	■
3.5	Construction and installation of facility/equipment		■	■	■	■		
3.6	Provision of IT training (Beginners course and intermediate course)		■	■	■	■	■	■
3.7	Provision of services		■	■	■	■	■	■
3.8	Management and maintenance		■	■	■	■	■	■

CHAPTER 11 COST OF RIP AND COST BEARING

11.1 Cost of RIP

The total cost of RIP is RM 134.1 million, consisting of RM 30.1 million for capital cost including Web contents development cost and RM 104.0 million for running cost including IT training cost. The budget required in the existing Five Year Plan (8th Malaysian Plan) is RM 42.0 million equivalent to 31.3 % of the total cost while RM 92.0 million equivalent to 68.7 % of the total is required in the next Five Year Plan (9th Malaysian Plan). It is recommended that allocated budget of RM10 million should be increased to meet the above requirement through the mid-term review of the current Five Year Plan in 2003 considering the substantial contribution of RIP to the digital divide bridging.

The following table shows year on year cost of RIP.

Cost of RIP

(1,000RM)

	Item	2003	2004	2005	2006	2007	2008	Total
1	3 model projects							
1.1	Running Cost							
	Sg. Air Tawar	51	51	51	51	51	51	306
	Bau	56	56	56	56	56	56	336
	Kota Marudu	73	73	73	73	73	73	438
1.2	IT training	168	168	168	168	168	168	1,008
1.3	Facilitation Consultant	31	16					47
1.4	Renewal Cost of 3 site systems			350			350	700
	Subtotal	379	364	698	348	348	698	2,835
2	Restructuring Cost of 13 existing RIC							
2.1	Initial Cost and Renewal Cost of RIC	1,240			1,240			2,480
2.2	Running Cost	780	780	780	780	780	780	4,680
2.3	IT training	728	728	728	728	728	728	4,368
2.4	Facilitation Consultant	135	67					202
2.5	Construction Cost of RIC Web Contents	26						26
	Subtotal	2,909	1,575	1,508	2,748	1,508	1,508	11,756
3	New RIC(2004)							
3.1	Initial Cost and Renewal Cost of RIC	4,368			4,368			8,736
3.2	Running Cost		3,136	3,136	3,136	3,136	3,136	15,680
3.3	IT training		3,136	3,136	3,136	3,136	3,136	15,680
3.4	Facilitation Consultant		581	291				872
3.5	Construction Cost of RIC Web Contents	112						112
	Subtotal	4,480	6,853	6,563	10,640	6,272	6,272	41,080
4	New RIC(2005)							
4.1	Initial Cost and Renewal Cost of RIC		4,368			4,368		8,736
4.2	Running Cost			3,136	3,136	3,136	3,136	12,544
4.3	IT training			3,136	3,136	3,136	3,136	12,544
4.4	Facilitation Consultant			581	291			872
4.5	Construction Cost of RIC Web Contents		112					112
	Sub Total		4,480	6,853	6,563	10,640	6,272	34,808
5	New RIC (2006)							
5.1	Initial Cost and Renewal Cost of RIC			4,368				4,368
5.2	Running Cost				3,136	3,136	3,136	9,408
5.3	IT training				3,136	3,136	3,136	9,408
5.4	Facilitation Consultant				581	291		872
5.5	Construction Cost of RIC Web Contents			112				112
	Sub Total			4,480	6,853	6,563	6,272	24,168
6	New RIC(2007)							
6.1	Initial Cost and Renewal Cost of RIC				4,368			4,368
6.2	Running Cost					3,136	3,136	6,272
6.3	IT training					3,136	3,136	6,272
6.4	Facilitation Consultant					581	291	872

6.5	Construction Cost of RIC Web Contents				112	0	0	112
	Subtotal				4,480	6,853	6,563	17,896
7	Server							
7.1	Server for RIC Web Contents	30						30
7.2	Server for RIC Systems Monitoring and User Registration	30						30
7.3	Software Development Cost	200						200
7.4	Running Cost	6	6	6	6	6	6	36
	Sub Total	266	6	6	6	6	6	296
8	MECM Staff							
8.1	Chief	60	60	60	60	60	60	360
8.2	Senior	144	144	144	144	144	144	864
8.3	Transport Expense	2	2	2	2	2	2	12
	Subtotal	206	206	206	206	206	206	1,236
9	Total	8,240	13,484	20,314	31,844	32,396	27,797	134,075
9.1	Total of RIC Construction Cost	6,006	4,480	4,830	10,088	4,368	350	30,122
9.2	Total of IT Training Cost	896	4,032	7,168	10,304	13,440	13,440	49,280
9.3	Total of IT Running Cost	966	4,102	7,238	10,374	13,510	13,510	49,700
9.4	Total of Other Cost	372	870	1,078	1,078	1,078	497	4,973

11.2 Cost Bearing

Considering the objective of RIP, RIP should be implemented as a public undertaking. All the capital and running costs required for the implementation of the Action Plan should, therefore, be borne by MECM in principle. However, Pos Malaysia being a privatized company, the Government can not directly finance the post office expansion cost to build an annex for RIC due to the Government rule. Hence it is recommended that Pos Malaysia bear the expansion cost then lease it to MECM. With regard to O&M costs, it is also recommended that the following costs should be borne by organizations other than MECM as follows which can serve for the desirous collaboration among MECM, State Government, the users and other organizations concerned.

- i) Maintenance cost for the building where RIC is placed should be borne by the organization that owns and manages the building, aiming at the efficient management of RIC and the promotion of collaboration among the organizations concerned.
- ii) RIC users should bear the cost of printing paper through the RIC Committee.

CHAPTER 12 CONTRIBUTION OF RIP TO BRIDGING THE DIGITAL DIVIDE BETWEEN RURAL AND URBAN AREAS

12.1 Contribution to Bridging the Digital Divide

Even though there are many indicators for measuring the digital divide, there is no international standard. Indicators for the Internet that are used in Japan (Ministry of Public Management, Home Affairs, Posts and Telecommunications) are listed below.

- Opportunity for Internet access
- Opportunity for receiving technical training

RIP/RIC provides an opportunity for Internet access and also provides technical training by direct advice by supervisors, self tutorial, and IT training for beginners, so the above mentioned indicators are appropriate as indicators for enhancement of info-communications access through RIP/RIC.

In specific, the number of first-time RIC users above 17 years old and number of IT trainees were estimated as indicators of Internet access and IT skill acquisition respectively for digital divide bridging by RIP. These indicators allow us to access the degree of contribution of RIP/RIC to bridging the digital divide.

(1) Number of RIC Users

The total number of users who will be served at the 240 RICs which will be established and operated during the 6 years of the project period until 2008 were estimated. The estimated numbers include the total number of RIC users and new users above 17 years old as people who have the first opportunity to access to the Internet.

(a) Total Number of Users

The total number of RIC users was estimated to reach 2.25 million people applying 5.99 person/PC/day, which is the average number of users of Sg. Air Tawar post office RIC and Kota Marudu post office RIC as a post office RIC model, and subject to the condition of 5 PCs at one RIC and 5 days operation a week.

Total Number of RIC Users							(people)
	2,003	2,004	2,005	2,006	2,007	2,008	Sub-Total
3 RIC	23,000	23,000	23,000	23,000	23,000	23,000	138,000
13 RIC	102,000	102,000	102,000	102,000	102,000	102,000	612,000
56 RIC		437,000	437,000	437,000	437,000	437,000	2,185,000
56 RIC			437,000	437,000	437,000	437,000	1,748,000
56 RIC				437,000	437,000	437,000	1,311,000
56 RIC					437,000	437,000	874,000
Sub-Total	127,003	564,004	1,001,005	1,438,006	1,875,007	1,875,008	6,868,000

(b) Number of New RIC Users above 17 years old

The total number of first-time RIC users above 17 years old, i.e., not counting repeat users, was estimated at about 1.26 million people applying 1.1 person/PC/day assuming 5 PCs at one RIC and 5 days of operation a week. The figure of 1.1 was obtained by subtracting the number of users below 18 years old (43.8%) from 1.96 person/PC/day, which is the average number of new users of Sg. Air Tawar post office RIC and Kota Marudu post office RIC.

Number of New RIC Users above 17 years old							(people)
	2,003	2,004	2,005	2,006	2,007	2,008	Sub-Total
3 RIC	4,000	4,000	4,000	4,000	4,000	4,000	24,000
13 RIC	19,000	19,000	19,000	19,000	19,000	19,000	114,000
56 RIC		80,000	80,000	80,000	80,000	80,000	400,000
56 RIC			80,000	80,000	80,000	80,000	320,000
56 RIC				80,000	80,000	80,000	240,000
56 RIC					80,000	80,000	160,000
Sub-Total	23,000	103,000	183,000	263,000	343,000	343,000	1,258,000

(2) Number of IT Trainees

The number of beginner IT trainees that will attend courses at the 240 RICs which will be established and operated during 6 years of the project period until 2008 assuming for two days course in every Saturday and Sunday with 5 PCs was estimated. It was estimated that about 460,000 people can acquire Internet access skills.

Number of IT Trainees							(people)
	2,003	2,004	2,005	2,006	2,007	2,008	Sub-Total
3 RIC	2,000	2,000	2,000	2,000	2,000	2,000	12,000
13 RIC	7,000	7,000	7,000	7,000	7,000	7,000	42,000
56 RIC		29,000	29,000	29,000	29,000	29,000	145,000
56 RIC			29,000	29,000	29,000	29,000	116,000
56 RIC				29,000	29,000	29,000	87,000
56 RIC					29,000	29,000	58,000
Sub-Total	9,000	38,000	67,000	96,000	125,000	125,000	460,000

12.2 Impact of RIC Use

Impact of Internet access through RIC is expected as follows.

(1) Improvement of living condition by increasing available information

Information sources in the rural area are limited to television, newspapers, and other publications. Use of the Internet can expand the amount of information, which is expected to contribute to improved access to education, to improved job opportunities, and to improved living conditions. Types of information are listed below.

- Improve access to education: access to information regarding educational institutes, school information including applications, entering virtual universities, etc.,
- Improve job opportunities: job offers, skill improvement by taking courses offered by virtual universities,
- Improvement of living conditions: information on public health, medical information and other knowledge for living, and
- Activation of community activities by organizing events, community activities, activation of communication.

(2) Communication cost reduction impact

- Using e-mail can reduce the communication cost, particularly long distance phone calls. According to the needs survey, there are many requests to use e-mail to communicate with relatives or friends in urban areas outside the community.
- Information collection through e-mail can save time and transport cost (Time and cost saving for moving from rural area to urban area. Cost of education and cost of job search.).

12.3 Impact of IT Training

As a part of RIC services, RIC provides IT training for RIC users including beginners. Through IT training, people with no computer knowledge can acquire computer knowledge by using computers at RIC. This will improve IT literacy and eventually add to their labor value. Increasing labor value will increase job opportunities, promotions, and income.

CHAPTER 13 SELECTION OF PRIORITY PROJECT AND EVALUATION OF THE CONTRIBUTION

Considering that large number of on-going pilot RIC are not functioning and the necessity of augmenting the experience of RIC management by MECM new Division as well as the lead time required for securing the additional budget for the new RIC, it is recommended that the revitalization of the 13 pilot RIC should be selected as priority project.

In implementing the project, it is recommended that the counter-measures against the prevailing problems of the pilot RIC should be firstly worked out and the experience of the model projects, in particular Sg. Air Tawar RIC should be referred to.

Beneficial effects of the priority project will be sizable. Namely, 612 thousand rural residents will get Internet access through the project implementation, of which 114 thousand will be the first time users above 17 years of age. Number of IT training participants will be 42 thousand.

CHAPTER 14 ACTIONS TOWARD THE COMPLETION OF RIP

It is recommended that after-completion plan should be worked out in the final year of the project period, including the treatment and disposal of the equipment and facility.

The plan should be worked out considering the progress of telecommunication infrastructure development in the rural area, introduction of IT devices into rural households and progress of digital divide bridging. Options may be to transfer RIC facility to the local communities or to other ministries/State Governments.

PART V :
ACHIEVEMENTS OF
TECHNOLOGY TRANSFER

PART V ACHIEVEMENTS OF TECHNOLOGY TRANSFER

CHAPTER 1 OBJECTIVES AND METHODOLOGIES FOR TECHNOLOGY TRANSFER

1.1 Objectives of Technology Transfer

Technology Transfer was conducted as one of the Study objectives during the course of the Study period. All works in Malaysia were carried out in close cooperation and joint-works with the counterpart personnel consisting of engineers and officers of the Central Government (MECM), State Governments, District Offices. In addition, the Model RIC Committees were also among the target groups of the technology transfer in the Study works.

The objectives of the technology transfer were to transfer skills and technology of enhancement of info-communication access in rural communities to counterpart personnel in the course of the Study. Items of Technology Transfer were summarized as shown below.

Transferred Items	Target Group	Method
1) Methods of Project Formulation		
Methods to draw up the Model Project	MECM	OJT, daily discussion/meeting
Methods to draw up the Action Plan	MECM	OJT, daily discussion/meeting
Methods to analyse existing projects	MECM	OJT, daily discussion/meeting
2) Info-communications infrastructure Development		
Planning of optimal communication network for RIC	MECM	OJT
Planning and construction supervision of Wireless LAN	MECM	OJT
Planning of Hardware(PC, peripheral equipment and Wireless LAN)	MECM/ each Model RIC Committee	OJT
3) Web Contents Development		
Web Server Management	MECM	OJT
Management of RIC Main Page	Each RIC Committee	OJT
4) IT Training		
Basic PC Usage	Ordinary people/ RIC Committee members	IT-short course
Basic Internet Usage	Ordinary people/ RIC Committee members	IT-short course
Management of each RIC Website	RIC Committee members	IT-short course
Management of Special Web-Modules for RIC - e-Reservation - e-Public Comment - e-Greeting Card	RIC Committee members	IT-short course
5) Capacity Building and Management		
Management know-how for RIC project	MECM/ RIC Committee	OJT/Workshop
Know-how of operation and maintenance	MECM/ RIC Committee	OJT/Workshop
Participatory approach for community involvement	MECM/ RIC Committee	OJT/Workshop
Management of the training or short courses in the Model Site	MECM/ RIC Committee	OJT/Workshop

1.2 Methodologies of Technology Transfer

The Study Team has made efforts to transfer technology on planning methods and skills as well as the basic data/information required for the planning. During the Works in Malaysia, the following four categories of technology transfer methods were adopted.

- i) On-the-job Training (OJT)
- ii) IT-short courses
- iii) Workshops
- iv) Technology Transfer Seminars

(1) On-the-job Training

On-the-job training was provided to each counterpart through day-to-day works. Not only does each team member undertake his responsibilities, but he also provided the counterpart with guidance as to the purpose and procedure of the investigation,

planning and implementation. In addition, each team member explained and discussed with the individual counterpart all activities of the works and their results based on the knowledge and experience possessed in each team member's area of expertise.

There are three major tasks that each RIC should carry out: daily system monitoring, system fault management, and configuration of computer systems.

- (i) Works of Daily System Monitoring
 - system power supply on/off operation
 - making of an operation manual for the system power supply
 - record of daily operation
- (ii) System Fault Management
 - take emergency action to deal with system failures
 - making of an operation manual for system failures
 - recording of system failures and repair
- (iii) Configuration of Computer Systems

JICA Study Team trained the monitors in system configuration change control.

(2) IT-Short Course

As a part of technology transfer, the following 3 training courses, "Course-1", "Course-2" and "Web Development Course", were held for the ordinary people and the members of the RIC Committees in the service areas of the 3 model RICs. The details of each training course are mentioned in Chapter 6 of Part III.

(a) Course-1

The course targeted PC beginners in the service area of the 3 model RICs. The objectives of the course were:

- to give chances to touch PCs
- to remove fears to touch PCs from the minds of the participants
- to teach about hardware and software
- to teach about components(parts) of a PC, and their names and usage

- to give basic knowledge and usage of a Keyboard, Mouse and Windows Operating System

In the training, the participants also learned the background of the RIC being promoted by MECM and about the outlines of cooperative works by the Japanese Government. Malaysian instructors hired by the Study Team conducted the courses. The textbooks and the training modules designed and developed by the JICA Study Team were used effectively in the training.

(b) Course-2

The course targeted the Internet beginners in the service area of the 3 model RICs. The objectives of the course were:

- to teach about the basic concepts of the Internet
- to teach about available services on the Internet
- to teach usage of Browsers, Search Engines and E-mail

In the training, the participants also learned the background of the RIC promoted by MECM and the outline of cooperative works by the Japanese Government. Malaysian Instructors who were hired by the Study Team conducted the short courses. The textbooks, which were designed and developed by the JICA Study Team, were used in the training.

(c) Web Development Course

The course targeted the RIC Committee members and task force members of the 3 model RICs. The objectives of the course were:

- to teach how to use hardware and software for the website development
- to give the members knowledge and practical skills for website development and management
- to teach how to use and manage web-modules which were specially developed for the ordinary people in the service areas of the 3 model RICs

The short courses were conducted by Malaysian Instructors who was hired by the Study Team. The textbooks, which were designed and developed by the JICA Study Team, were used in the training.

(3) Workshops

Three workshops of workshop-1 (opening ceremony), photo contest workshop and workshop-2 (post evaluation workshop) were held in the model project. These workshops were prepared and implemented by the RIC Committees supported by MECM and the Study Team. At the end of the work period in Malaysia, an experience sharing workshop for the model project implementation and a seminar to transfer the planning methodologies as well as to present all the achievements of technology transfer were held. The technology was transferred through these activities.

(4) Material for Technology Transfer

The Study Team prepared and used the following material for technology transfer and supplied those to the target groups.

For IT Training

Documents/Modules	Language
Textbook for IT-Short Course	
• IT-Short Course 1 Textbook	Malay
• IT-Short Course 1 Sub-textbook (“Using Notepad”)	Malay
• IT-Short Course 2 Textbook	Malay
Training Module	
Training Kit Installation Guide	Malay
• Mouse Training Module	Malay
• Typing Training Module	Malay
• Main Tutorial (Module)	Malay
• Examination Module	Malay

For RIC Website Development and Maintenance

Documents	Language
• Web Editing Manual (for RIC website)	English, Malay
• e-Greeting Card Manual (for users and administrators)	English, Malay
• e-Public Comment Manual (for users)	English, Malay
• e-Reservation Manual (for users and administrators)	English, Malay
• RIC Common Website Guide	English
• RIC Sg. Air Tawar Website Guide	English
• RIC Bau Website Guide	English
• RIC Kota Marudu Website Guide	English

The RIC Management Book was prepared as feedback through the daily operation of the RICs in the Model Projects.

For RIC Management

Documents and Contents	Language
<ul style="list-style-type: none"> • RIC Management Book <ul style="list-style-type: none"> - Contact List - Password List - “How to Turn PC On/Off” - “Recovery from Power Failure” - “Auto-Logon Settings on Windows XP” (for Security Protection) - “How to install Microsoft Office XP” - “How to get a free E-mail address on Yahoo! USA” (for new E-mail users) - “How to activate MS Office XP products” - “Inventory List of Software and Hardware of the RIC” 	<ul style="list-style-type: none"> English English English English English English English, Malay English English
<ul style="list-style-type: none"> • RIC Management Forms and Templates <ul style="list-style-type: none"> - RIC Visitor Log - Weekly Report Form - RIC Operation Log - Failure and Repair Log 	<ul style="list-style-type: none"> English English English English

CHAPTER 2 ACHIEVEMENTS OF TECHNOLOGY TRANSFER

2.1 Technology Transfer in Malaysia

The counterpart agency, MECM, has gotten know-how to formulate the project planning and methods of analyzing necessary data for the planning through the daily cooperative works and discussion meetings with the Study Team. Both sides closely and frequently had discussions over the contents of each report prepared by the Study Team which included results of data analysis, the interim action plan or model project plan. Through the discussion and cooperative works, both sides reached agreements on various aspects in planning optimal action for the Rural Internet Program.

2.1.1 Telecommunication Infrastructure and LAN

The technologies and knowledge were transferred with following methods.

- The characteristics and construction of the communication infrastructure were explained to the person in charge of MECM while he was present at the system construction of the three model project sites.
- The specifications of the equipment and the details of the construction were discussed with the counterpart agency, MECM, and the tender specification “Technical specifications for construction of wireless LAN in Kota Marudu” was worked up.
- The results of the communication infrastructure comparison experiment were mentioned in the Draft final report, and they are explained.

The JICA Study Team transferred the technologies about the design of info-communication infrastructure through ordinary cooperative works with the counterpart agency, MECM. The technologies and knowledge achieved by MECM are shown below.

- To draw up the framework of the communication infrastructures
- To draw up the design of communication lines
- To invite tenders for construction/installation works for communication infrastructure
- To supervise the construction works done by the contractors
- To understand the features of each communication system

The JICA Study Team successfully transferred the technologies of operation and maintenance of the RIC computer systems at the three RIC sites. The monitoring staff worked hard on daily

care of PC equipment in each RIC. They could properly cope with PC troubles and also report to MECM in case of emergency.

2.1.2 Homepage Updating

A training course was executed at the each site using the Homepage Updating Manual prepared by the JICA study team. The target group was task force members at each site. All participants could follow the training course. The participants also successfully updated home pages.

2.1.3 IT Training

(1) Courses-1 and 2

There were a large number of applications for the training course in each of the model sites. The number was well over the full quota of the course. In Sg. Air Tawar and Bau, the majority of the openings were occupied by primary/secondary school students. In Kota Marudu, the majority was comprised of housewives and farmers.

Most participants could have finished the training and also understood the contents of the training in spite of the brevity of the training hours or it being their first opportunity to touch PCs or have contact with the Internet.

The participants were also satisfied with the performance and contents of the training material. Almost all the participants showed an interest to learn more about PCs or Internet usage, and they considered that the training gave them some advantage in terms of increasing education and job opportunities.

However, some participants, females or people of advanced age, seemed to not get enough understanding, knowledge or skills to use PCs or the Internet. They requested to practice and study the contents of the training as often as possible.

The number of the participants for each training course is shown below.

Record of Participation in Course-1

	Sg. Air Tawar RIC	Bau RIC	Kota Marudu RIC
Venue	Post Office	Civic Center	Post Office
Start	September 9, 2002	September 7, 2002	September 11, 2002
End	November 7, 2002	November 10, 2002	November 6, 2002
Number of Sessions	19	27	17
Total Participants	45 (Male: 13, Female: 32)	91 (Male: 38, Female: 53)	43 (Male: 15, Female: 28)

Record of Participation in Course-2

	Sg. Air Tawar RIC	Bau RIC	Kota Marudu RIC
Venue	Post Office	Civic Center	Post Office
Start	September 9, 2002	September 7, 2002	September 12, 2002
End	November 8, 2002	November 10, 2002	November 7, 2002
Number of Sessions	17	20	16
Total Participants	48 (Male: 14, Female: 34)	73 (Male: 31, Female: 42)	37 (Male: 11, Female: 26)

(2) Website Development Course

The participation was highly motivated in the two-day training held at each model RIC. The trainees showed strong interest in getting good skills and knowledge to develop their own RIC websites. Almost of all the participants could have successfully finished the course of the training. In each RIC, at least 1 or 2 participant(s) have almost completely gotten enough knowledge and skills to develop the website. As an achievement of the training, each RIC Committee updated each model RIC website at least four times.

Record of Participation in Website Development Course

	Sg. Air Tawar RIC	Bau RIC	Kota Marudu RIC
Venue	Post Office	Civic Center	Post Office
Duration	September 28-29, 2002	October 3-4, 2002	October 1-2
Total Participants	6	6	10

(3) Design of IT-Training

The counterpart personnel have obtained the know-how to design the IT-training and its methods for beginners and to develop the training material through the discussions based on the draft plan or prototype of training material prepared by the Study Team. They also gave the Study Team useful suggestions to design the training or the training material. Their comments were effectively reflected in the planning of the training in the Model Projects and for the future Action Plan.

The personnel and the Study Team discussed the performance of the training after the end of the model projects. Consequently, they have come to know the problems in training the beginners, and realized the importance of training rural people to activate or vitalize the RICs in rural areas.

(4) Management of Training Courses

Through the implementation of the Model Projects, each model RIC committee and Malaysian monitoring staff member learned about management of the IT-Training through the cooperative works and meetings with the Study Team.

Each model RIC Committee and Malaysian monitoring staff member have gotten the know-how to manage IT-Short Courses and to arrange applicants and participants as a result of the cooperative works with the Study Team. They also have had experience in advertising the short courses and how to teach beginners using PCs and training material developed by the Study Team through the Model Projects.

2.1.4 Management of RICs

During the period of the Model Projects, the management skills and technology for Rural Internet Centers were transferred to the counterpart personnel and RIC Committee members, including monitors, through the joint-work with the Study Team. Specifically:

- Operation and Maintenance of RIC, e.g., computer first-aid trouble shooting
- Monitoring of RIC usage
- Management of IT training
- Maintenance and updating of RIC web contents
- Periodical RIC Committee meetings
- Opening Ceremony (Workshop-1), photo contest workshop, post evaluation workshop (workshop-2)

2.1.5 Publicity and Community Involvement

Technology for obtaining the publicity of RICs and community involvement was transferred to the counterparts as well as the RIC Committee and Task Force members through jointly planning and holding the workshops as well as through the preparation of publicizing materials.

2.1.6 Experience Sharing Workshop and Technology Transfer Seminar

(1) Experience Sharing Workshop

The experience sharing workshop was held on 26th December 2002 at Pos Malaysia Training Centre, Bangi, Selangor with about 50 participants including RIC Committee members from 13 RICs. The program is as follows.

Programme of Experience Sharing Workshop

13:45 – 14:00 PM	Participants Registration
14:00 – 14:05 PM	Welcoming Address by Mrs. Azizah Hamzah, Division Secretary, of Communications & Multimedia Unit, Ministry of Energy, Communications & Multimedia
14:05 – 14:10 PM	Opening Speech by Mr. Masatoshi Akagawa, Leader of Study Team
14:10 – 14:50 PM	Self Introduction Session <ul style="list-style-type: none"> • Representative from Each Rural Internet Centre Committee (16 Rural Internet Centre)
14:50 – 15:20 PM	Presentation on Model Project Experience by Representatives of 3 Model Project Sites <ul style="list-style-type: none"> • Introduction of Committee's Activities in Model Project • Introduction of Summary Result of Workshop – 2 Discussion



(2) Technology Transfer Seminar

The technology transfer seminar was held on 27th December 2002 at Pos Malaysia Training Centre, Bangi, Selangor with more than 80 participants. The program is as follows.

Programme of Technology Transfer Seminar

08:30 – 09:00 AM	Registration of Participants
09:00 – 09:20 AM	Opening Address by Datuk Dr. Halim Shafie, Secretary General, Ministry of Energy, Communications and Multimedia
09:20 – 09:30 AM	Welcoming Address by Mr. Toshio Hida, Resident Representative, JICA Malaysia Office
09:30 – 10:45 AM	Briefing on Study Achievement, Mr. Masatoshi Akagawa, Leader of Study Team <ul style="list-style-type: none"> • Scope of Study and Cooperation of Malaysia Side • Summary of Overall Achievements : Implementation of the 3 Model Projects
10:45 – 11:00 AM	Coffee Break
11:00 – 12:30 PM	Briefing on Achievement in Technology Transfer <ul style="list-style-type: none"> • Summary by JICA Study Team • Briefing by Ministry of Energy, Communications and Multimedia Representative • Briefing by Rural Internet Centre Committees (3 Model RIC)
12:30 – 14:30 PM	Lunch Break
14:30 – 15:15 PM	Briefing on Recommendations on RIP Action Plan, JICA Study Team
15:15 – 16:00 PM	Question and Answer
16:00 – 16:45 PM	Panel Discussion / Q & A
16:45 – 17:00 PM	Closing Remarks by Ms. Suriah Abdul Rahman, Deputy Secretary General I, Ministry of Energy, Communications and Multimedia



2.2 Technology Transfer in Japan

A counterpart training program was conducted in Japan so that they could learn about Japanese technology and experiences. Two counterparts, the chief counterpart and the vice chief counterpart, had visited Japan for two weeks from 7th July till 21st July.

The training program included the lectures for the Japanese policy on info-communication access, Japanese advanced technology for info-communication infrastructure, Japanese experiences with community websites, community revitalization through ICT and community-based computer training clubs.

Through the program, the technology was transferred to the counterparts. These programs were successful and useful for them.