# International Telecommunication Union



Telecommunication Development Bureau

19 January 2009

Ref:

To all Arab Ministers in charge of telecommunications

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Subject: Feasibility Study on Low-Cost Wireless Broadband Infrastructure

Dear Sir/Madam,

First of all, I would like to express my sincere gratitude and appreciation for your continuous support for the activities of ITU.

I am pleased to inform you that, with the support of the Ministry of Internal Affairs and Communications (MIC), Japan, ITU intends to carry out the Feasibility Study on Low-Cost Wireless Broadband Infrastructure soon, to seek the possibility of a new technical solution that could reduce the costs of establishing telecommunication infrastructure. The Feasibility Study is aimed at:

- Reviewing the wireless technologies to be applied to broadband infrastructure for developing countries,
- Developing the case studies of establishing wireless broadband infrastructure at lower costs by the simulation, and
- Planning the future pilot project which demonstrates the actual broadband infrastructure.

For further details, please kindly find the document annexed to this letter.

To achieve this feasibility study, ITU invites your cooperation and asks you to appoint a national expert as focal point by early February who will coordinate and provide assistance and information to realize this study. Please send the coordinates of the national counterpart including name, email address, phone/fax number, etc. to Mr. Tomoo NEMOTO, the focal point for this project.

I am looking forward to hearing from you. Should you need any further information, please do not hesitate to contact us.

Accept, Sir/Madam, the assurances of my highest consideration,

Sami Al Basheer Al Morshid

Director

Annex: Project Document of the Feasibility Study

E-mail: itumail@itu.int www.itu.int



# International Telecommunication Union Telecommunication Development Bureau

Project Budget Number:

9RAB09017

Project Title:

Feasibility Study on Low-Cost Wireless Broadband Infrastructure

**Project Short Title** 

FS WRI

**Estimated Start Date:** 

January 2009

Estimated End Date:

December 2009

Government Cooperation

Agency:

Ministry of Internal Affairs and

Communications (MIC), Japan

Implementing Agency:

International Telecommunication

Union

Project Site:

**Arab Countries** 

Beneficiary Countries:

Identified Countries

ITU Project Manager:

Tomoo NEMOTO

#### SUMMARY OF CONTRIBUTIONS

A) Project Budget:

Description In US\$
Personnel 87'000
Miscellaneous 15'041

ITU AOS(10%)

10'204

Total

112'245

B) Cost Sharing:

MIC, Japan: JPY 11'000'000 (equivalent to

US\$ 112'245)

(In case of the difference in the exchange rate between JPY & USS, Non-Distributed cost under MISCELLANEOUS will be

adjusted.)

#### **Brief Description:**

Under this project, ITU, in close collaboration with the Ministry of Internal Affairs and Communications (MIC), Japan, will carry out a Feasibility Study on Low-Cost Wireless Broadband Infrastructure for developing countries, in order to achieve case studies in selected countries, draft project document for future pilot project, and a input document for relevant ITU-D meeting. It is to identify new technical solutions that could reduce the costs of establishing broadband telecommunication infrastructure in developing countries.

On Behalf of

Signature

Date

Name/Title

ITU:

041208

Sami Al Basheer Al Morshid, Director of BDT

MIC:

130/09

Shigeo Tani, Director-General for International Affairs,

Global ICT Strategy Bureau

#### 1 BACKGROUND & CONTEXT

#### 1.1 General introduction

Wireless technology seems quite suitable for rural and remote areas. For instance, for considerable time, Africa has been known as the continent of people with scarce means of access to telecommunication networks while people were working on a primary wireline, but actually the number of its mobile phone subscribers has been increasing in recent years at the world's fastest growth rate.

Now broadband telecommunications provide the basis for supplying various vital services (e.g. e-health, e-learning, e-government, etc.), which rural and remote areas especially aspire to receive. Wireless technology is expected to accelerate the promotion of the broadband telecommunications, by lowering the costs in such areas. The wireless technology for the broadband telecommunications also contributes for the extension of the mobile coverage, as it can be applied to the mobile backhaul networks. In fact, there are several types of wireless technologies which enable it.

Nevertheless, for developing countries, to identify which technology is suitable is sometimes difficult. The activities by ITU-D, such as the collection of relevant case studies, are surely helpful. However, some countries yet need further help in interpretation of the case study or wish to have direct assistance for the identifications.

Therefore, ITU will assist the countries in selecting a suitable solution to establishing wireless broadband infrastructure, which invites further extension of broadband networks, as well as mobile networks, to rural and remote areas, by organizing the Feasibility Study on Low-Cost Wireless Broadband Infrastructure for developing countries. The Feasibility Study is aimed at reviewing the wireless technologies to be applied to broadband infrastructure for developing countries, developing the case studies of establishing wireless broadband infrastructure at lower costs by the simulation, and planning the future pilot project which demonstrates the actual broadband infrastructure.

The Ministry of Internal Affairs and Communication (MIC), Japan committed its financial support for the Feasibility Study and further support for future pilot project is also expected. MIC wishes that the Feasibility Study would be carried out for two target countries in Arab region, subject to their acceptance.

## 1.2 Relationship to other past and current BDT programmes / activities

The Rapporteurs Group on Question 20-2/2 "Examination of access technologies for broadband telecommunications", ITU-D, is currently studying with this regard, by collecting and analyzing case studies and formulating the technology matrices on broadband access technologies.

This Project is mainly to focus on the identification of the future pilot project, which demonstrates the Low-Cost Wireless Broadband Infrastructure for developing countries, and also to input the case studies and the necessary information for updating the technology matrix of the Rapporteurs Group on Question 20-2/2, "Examination of access technologies for broadband telecommunications", SG2, ITU-D.

## 2 PROJECT OBJECTIVES

To encourage further extension of broadband coverage in developing countries, by identifying suitable technologies for broadband access and connectivity in developing countries.

#### 3 EXPECTED OUTPUTS

The expected outputs of this project are:

- Case studies in identified countries developed, based on the study sites;
- Draft project document for future pilot project prepared;
- Based on the achievement of this project, an input document prepared concerning broadband access technologies to the Rapporteurs Group on Question 20-2/2, SG2, ITU-D.

-N ' 2/6

#### 4 ACTIVITIES

In order to deliver the expected result, the following main activities will be carried out:

- Preparation for Field Survey
  - Recruitment of three experts (One of them would be contributed in-kind by third party.)
  - Preparing the questionnaires to be sent to possible target countries
  - o Identification of the target countries and their focal points (It is noted that MIC has shown the interest for Tunisia and Jordan as the target countries, subject to the acceptance by these two countries, the Field Survey will be carried out in Tunisia and Jordan, otherwise ITU and MIC will look for other interested and potential countries.)
- Field Survey
- Analysis and Study

#### 5 INPUTS

#### 5.1 Ministry of Internal Affairs and Communications (MIC), Japan

- In Cash Contribution: JPY 11'000'000 (equivalent to 112'245 US\$)
- · In-kind Contribution:

Assistance in Analysis and Study, Securing a third party expert to carry out Preparation for Field Survey, Field Survey, and Analysis and Study above.

#### 6 RISKS

The primary risks are:

- Lack of the target countries or delay in their cooperation (to implement this project)
  - The risk can be mitigated by close coordination between possible candidates for target countries.
- Insufficient budget to execute the Field Survey
  - The risk can be mitigated by precise planning under the cooperation with relevant persons from the target countries, at the stage of the Preparation for the Field Survey.
- Complicacy in Analysis and Study
  - The risk can be mitigated by recruitment of the knowledgeable and well-experienced experts. The assistance provided by MIC in kind may also mitigate the risk.

#### 7 MANAGEMENT

# 7.1 General Management

The Project is to be managed by the Project Manager who will be assisted by three experts and in close coordination with the focal points from all parties.



# 7.2 Roles and Responsibilities

#### 7.2.1 ITU

- The ITU will act as the implementing agency and provide a staff, as a Project Manager, for overall project supervision, monitoring, and coordination; and
- Recruit and supervise the experts;
- · Correspond with the relevant parties;
- Provide advice and assistance to the project team, through the regional office, when it is required.

#### 7.2.2 MIC, Japan

- MIC will provide the assistance to the project team for Analysis and Study; and
- · Secure a third party expert contributed in kind,
- Consider further funding, which may be required in case of the change in the Project.
- Make a voluntary contribution, as mentioned in 5.1 above

#### 7.2.3 Beneficiary Countries

 The beneficiary countries, which designated as the target countries, may provide the assistance to the project team for Field Study.

#### 8 MONITORING AND EVALUATION

The progress of the Project will be monitored through quarterly evaluation reports issued by the Project Manager and an evaluation report will be prepared at the end of the Project. Upon conclusion of the Project carried out by the experts, the Project Manager shall be responsible for preparation of the project closure report in coordination with the Project Coordinator..

### 9 BUDGET BREAKDOWN

For the budget breakdown of the Project, please see Annex A.

#### 10 WORK PLAN

For the work plan of the Project, please see Annex B.

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# Annex A INTERNATIONAL TELECOMMUNICATION UNION

# INITIAL BUDGET DATE

				US\$
				TOTAL BUDGET
	PERSONNEL COSTS			
	International Personnel			
11.01	Experts on Wireless Broadband	m	ı	75′000
11.90	Int. Personnel Non-Distributed			0
	Total International Personnel		11.99	75'000
	Missions			
16.01	Missions			12'000
	Total Mission Costs		16.99	12'000
	TOTAL PERSONNEL COSTS		19	87'000
	MISCELLANEOUS COSTS			
	Reporting Costs			
52.01	Reports			3,000
	Total Reporting Costs		52.99	3,000
	Sundries			
53.01	Sundries			5,000
53.90	Non-Distributed			7'041
	Total Sundry Costs		53.99	12'041
	TOTAL MISCELLANEOUS		59	15'041
	SUB-TOTAL PROJECT			102'041
	OTHER ADMIN & SUPPORT COSTS			
	ITU AOS	10	% <del>9</del> 8	10'204
	BUDGET REMAINING TO BE ALLOCATED			0
	TOTAL BUDGET		99	112'245

Note: In case of the difference in the exchange rate between JPY & US\$, Non-Distributed cost under MISCELLANEOUS will be adjusted to maintain TOTAL BUDGET to be equivalent to JPY 11'000'000.

Annex B

This work plan will be reviewed and modified according to the project implementation, and detailed working plan will be prepared.

PERT Project Evaluation & Review Table ΙD Activities Pre D days M0 Μi M2 Mβ M4 МБ M6 M7 MB N 30 Preparation for Field Survey 1 30 Field Survey 2 30 3 Analysis and Study 3 10 reporting and closing

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