



New Technologies for Rural Applications

Overview of Rural Connectivity Initiative

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Focal Point New Technologies for Rural Applications**



Presentation Outline

- **The Rural Connectivity Initiative**
- **The Problem**
- **Background of Final Report**
- **Contents and Final Recommendations**
- **Implementation & Work Plan**
- **Conclusions**



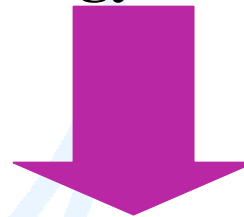
Rural Connectivity

Improve information flow

Promote micro-finance for rural ICTs

Promote new technologies ie. Mobile Internet




Examine renewable energy for ICTs in rural areas



Improve connectivity in rural and remote areas, increase ICT access and lower cost



Rural ICTs :

-  Rural and remote areas are being increasingly ignored by domestic and international service providers in roll out of services
-  Universal service obligations mean finding attractive and affordable means of extending service
-  Emerging Wireless IP Technologies to complement existing infrastructure, may offer lower cost alternatives to access problems



Infrastructure: Limited and Expensive

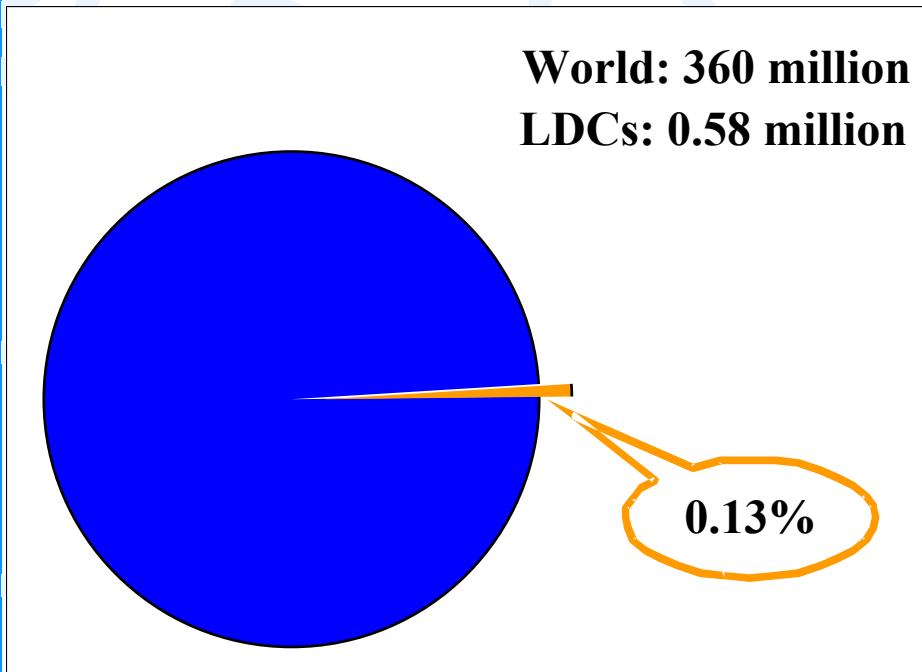
Source: ITU/SPU April 2002

Country	Uplink/downlink capacity	Population (million)	Proportionate cost per 64 Kbit/s unit/month
Lao PDR	1.644/ 1.244 Mbit/s	5.23	<i>n.a.</i>
Rwanda	1.256/1.5 Mbit/s	7.73	<i>n.a.</i>
Mali	2/3 Mbit/s	11.23	USD 1'500
Samoa	512/2.256 Kbit/s	0.18	USD 840
Cambodia	3.5/6 Mbit/s	13.11	USD 625
Mozambique	1.6/2.2 Mbit/s	19.68	<i>n.a.</i>
Gambia	5/5 Mbit/s	1.30	USD 625/265
Nepal	5.5/10 Mbit/s	23.04	USD 625
Uganda	4/12 Mbit/s	23.30	<i>n.a.</i>

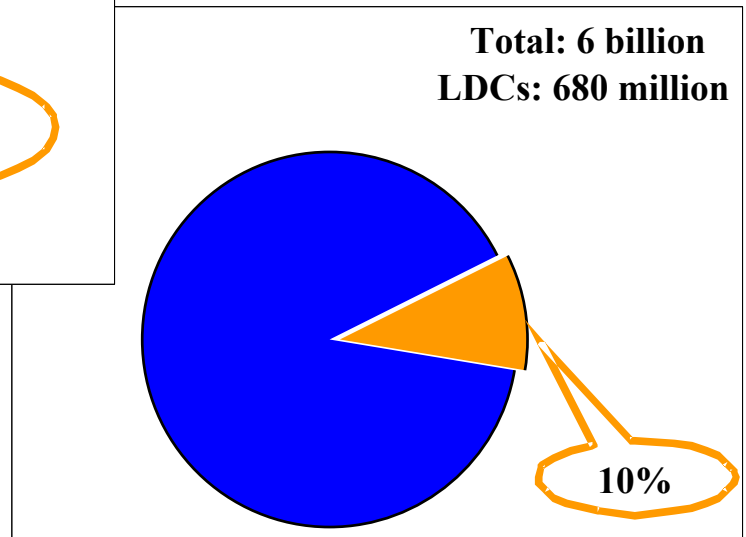


Increasingly remote...

Source: ITU/SPU April 2002



Estimated Internet Users



Population








Final Report















Background of Rural Connectivity Initiative

-  **VAP calls for promotion of universal service for rural and remote areas**
-  **Focus Group 7, under Chair of Y. Kawasumi from Japan produced report New Technologies for Rural Application**
-  **Task Force was created by TDAG to continue work and it aims to oversee implementation of Report for the WSIS**
-  **WTCD 02 endorsed recommendations with Resolution 11 and inclusion in IAP**
-  **At present, initiative has been fully funded by Japanese Administration**









Contents: Overview of Different Technologies

-  Narrowband packet radio
-  GSM solutions
-  P-MP WLL solutions
-  P-P/DECT WLL
-  CDMA 450 (450 Mhz)
-  VSAT
-  Satellite / Digital Satellite Radio
-  Meteor Burst Communications
-  IMT 2000
-  Wireless routers/VOIP









Contents: Delineation of Renewable Energy Solutions

-  Balance of system components
-  Solar Power
-  Wind Energy
-  Micro-hydro power
-  Hybrid power systems
-  Clockwork power ie. Freeplay radio



Recommendations in Final Report

-  Rec. 1: *Promote the development of low-cost information appliances for rural use.*
-  Rec. 2: *Publish a renewable energy handbook on small-scale power systems for rural use.*
-  Rec. 3: *Increase collaboration with micro-finance organizations to help develop communication based rural businesses and applications.*
-  Rec. 4: *Conduct pilot projects of packet-based wireless access infrastructure for multimedia applications.*
-  Rec. 5: *Maintain and expand the web site:*
<http://www.itu.int/ITU-D/fg7/>
-  Rec. 6: *Hold a symposium on new technologies for rural applications*





Needs assessment


- 🌐 **Connectivity:** Would such an initiative to test wireless IP be useful for rural areas of your country?
- 🌐 **Information: Provide information on successful rural connectivity projects in your country and region to build the on-line case library**
- 🌐 **Power:** Provide examples on the comparative effectiveness of **renewable energy systems** in rural ICT applications
- 🌐 **Finance:** Foster **micro-financing** and strategies to fund rural ICT projects and programmes
- 🌐 **Regulatory Incentives**
- 🌐 **What are needs of rural people?**



Implementation

-  Rec. 2 RENEWABLE ENERGY RESOURCE
 - Goal: Completion WSIS
 - Support and Inputs Needed

-  Rec. 3 Collaboration MICRO FINANCE
 - Enhanced focus required

-  Rec. 4 Study of packet-based wireless access infrastructure
 - Proposals Welcome
 - Financing and Support Required
 - Goal: Recommendations for WSIS



Implementation

Rec. 1: INFORMATION EXCHANGE





- www.itu.int/ITU_D/fg7
- On line library
- On line catalogue of suppliers

Res. 4 Goals and objectives of Study

- 🌐 Launch or participate in the evaluation of at least five existing wireless IP pilot projects
- 🌐 Ideally, geographic representation
- 🌐 Evaluate application of wireless IP in rural and remote areas over a six month period to assess:
 - Financial viability
 - Sustainability
 - Technological capabilities: quality / quantity
 - Maintenance requirements
 - Socio-economic benefits
 - Overall suitability for rural and remote areas
 - Provide recommendations to WSIS



Deadlines

-  Project Proposals: May 2002 – Jan 2002
-  Project Implementation: May 2002 – Sept 2003 (6 month pilot each)
-  Project Evaluation: Ongoing with formal evaluations Jan 2003-June 2003
-  Final Report and Recommendations: December 2003

Pilot Project Procedures

- ① Formal request to Director of the BDT
- ① Submission of a Project Document or collaborative design of project document with BDT/ITU staff
- ① Project assessment by:
 - Chair Task Force
 - BDT Director and staff
 - ITU Regional Office
- ① Request for additional funding and partnerships
- ① If accepted, project launch, evaluation



Project Document

- 🌐 Local/National/Regional partners are free to design project to meet own criterion

- 🌐 Terms of Reference found on the site:
 - www.itu.int/ITU-D/fg7

- 🌐 Project Document, however must include:
 - Description of local site : Generally 5-10 village network with short distances between each community
 - Delineation of local, national regional partner contributions and support (including in-kind costs such as engineering, interconnection, logistics, training, promotion etc as well as cash contributions from Universal Service funds, other local, national, regional, global partners)

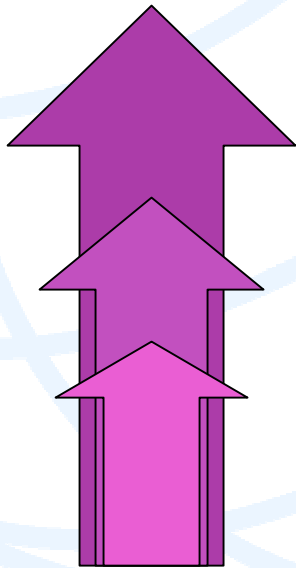


Using Wireless IP in Rural Areas

(Based on indicative figures in FG7 report)




Item	Set	Cost
Antenna	10	24,000
VoIP Gateway	10	48,000
PCs		
Peripherals	30	25,000
Community Servers	10	8,000
(Router- PSTN and other	1	4,000
	2	2,000
Total		110,000

The effect of a Pilot in Wireless IP



- Regulatory change and increased connectivity
- Pilot Testing of wireless technology and applications
- Connectivity in rural areas

Expected results

-  Participate in existing projects or launch new pilot projects to objectively evaluate the applicability of new technologies in rural areas, particularly wireless IP
-  Five geographic pilots completed by WSIS
-  Your collaboration is essential to:
 - Assess interest or need in hosting a pilot
 - Identify and collaborate with partners



Our New Mandate from WTDC and Council 02

Istanbul Action Plan 2002

- Integrate as cross cutting project

Recommendations from WTDC 2002

- Resolutions 11 / 35 / 37 / 39 / 41-44







Strategic Plan for the Union

- Council 2002



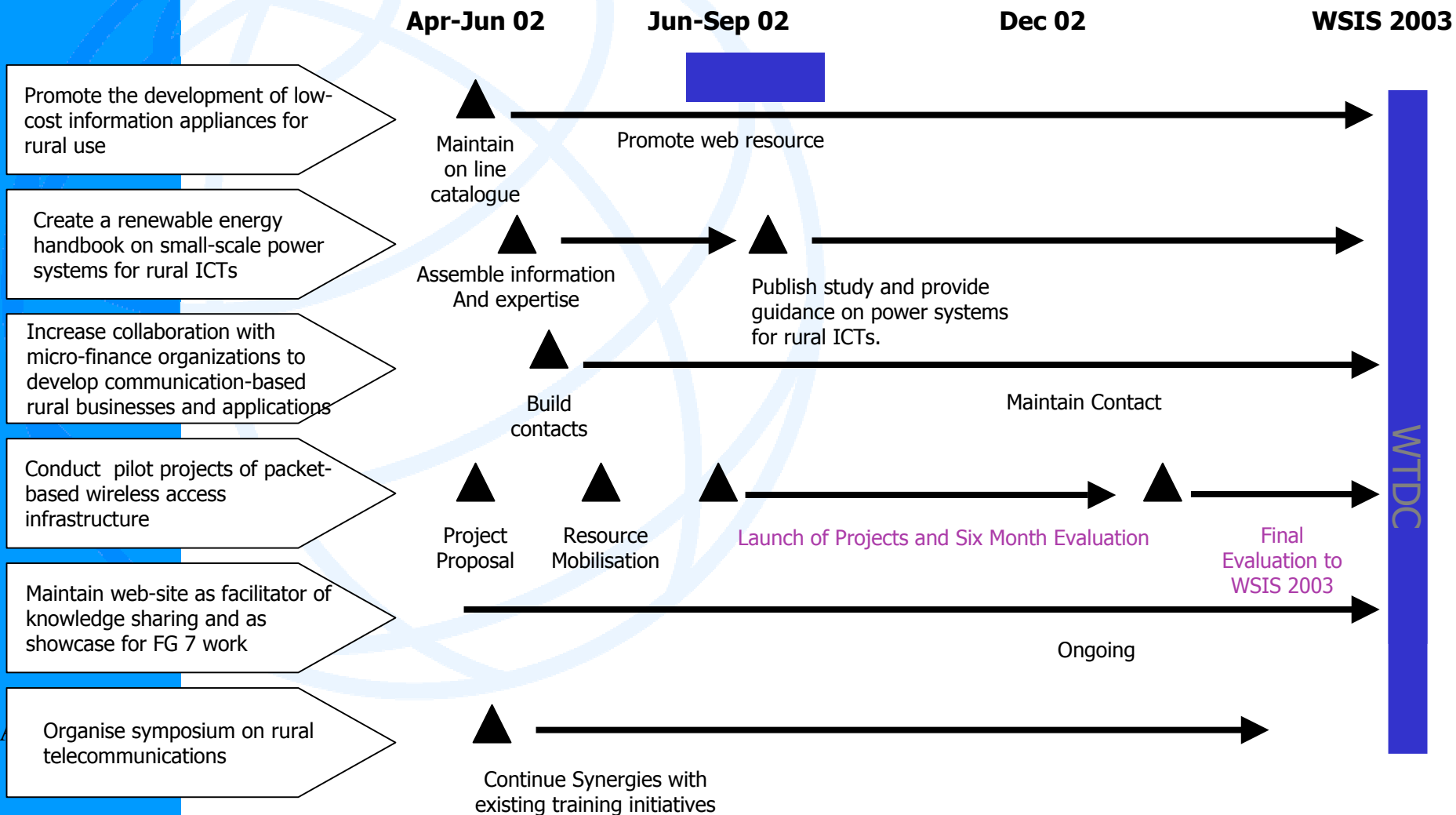
Rural Connectivity :

Dynamic Cross-cutting activity in the BDT

-  Regulatory Reform
-  Technology and Network Development
-  E-Strategies
-  Economics and Finance
-  Human Capacity Building
-  LDCs
-  Regional Focus
-  Private Sector Partnerships
-  Gender dimension
-  Rural People, Indigenous People, Youth
-  Diversify and Increase ITU Membership







Draft Work Plan of the FG7 Task Force





An Invitation for you...

-  **Participate in the work of the Task Force on New Technologies and infuse life into SG Question 10/2 on rural issues. Targeting needs of rural users is paramount to bridge digital divide**
-  **Exchange information on new technologies and low cost power solutions for rural areas**
-  **Participate in a pilot project to evaluate wireless IP applications in rural areas**
-  **This rural connectivity initiative will not survive without your support**



**Merci pour votre
attention.**

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