ITU-ANATEL Regional Seminar on Broadband Wireless Access (BWA) for Rural and Remote Areas for the Americas

Loral Skynet's Solutions for Rural Communications

- ***Final Report of Focus Group 7: more than 2.5 billion people (about 40 per cent of the world's population) live in the rural and remote areas of developing countries.***
  - *Of these 2.5 billion, only a small fraction has any access to telecommunications*
  - *Radio broadcast and voice telephony have traditionally been the main services provided.*
- ***The Valletta Action Plan, formulated at the second ITU World Telecommunication Development Conference in March 1998, sought to promote universal access to basic telecommunication, broadcasting and Internet as tools for development in rural and remote areas.***

Telecommunications is Only Part of the Solution

- *Eliminating disparities in access to, and use of, information and communication technologies (ICT) is now firmly on the global agenda*
- *Many of the problems facing rural areas are outside the scope of telecommunications alone to resolve and require coordination of rural electrification, transport network development, education and training programmes*
- *There is also a need to design more cost-effective technology solutions for rural areas with the needs and economies of rural communities in mind*

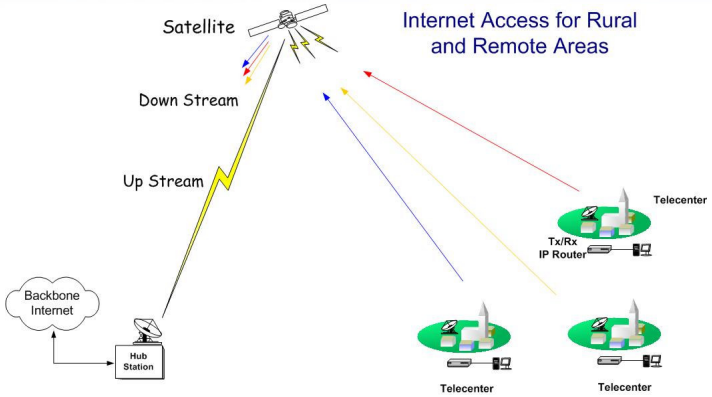
Recommendations of Focus Group 7

- *There is a need for robust systems combining low-cost, wireless access technologies with packet-based networks for possible delivery of Internet in rural and remote areas.*
- *Satellite networks can play an important role in providing Internet access to rural and remote areas.*
- *Many of rural and remote areas do not have terrestrial infrastructure allowing access to the nearest Internet point of presence.*
- *Accessing Internet via a two-way satellite connection may be a feasible option in these areas.*

Two-way Satellite Technologies Available to Rural and Remote Areas for Internet Access

- ***TDM-TDMA VSAT network***
  - *Data, voice*
  - *Outbound : 256kbps ; Inbound : 64kbps*
- ***DVB-RCS VSAT network***
  - *Data, voice and video*
  - *Outbound : 20Mbps ; Inbound : 2Mbps*

Two-way Satellite Technologies Available to Rural and Remote Areas for Internet Access



Case Study – BRAZIL (1 of 3)

- **Electronic Government – Service of attention to the citizen – GESAC**
  - Status of the project : Operational
  - Type of application/service
    - Multipurpose telecenters, community development, tele-administration
    - Support for small business, e-business
    - E-health
    - Tele-education
    - ICT training

Case Study – BRAZIL (2 of 3)

- **Type of technology :**
  - Satellite two-way communications
- **Organizations involved in the project**
  - Ministry of communications
  - Ministry of defense
  - Ministry of education

Case Study – BRAZIL (3 of3)

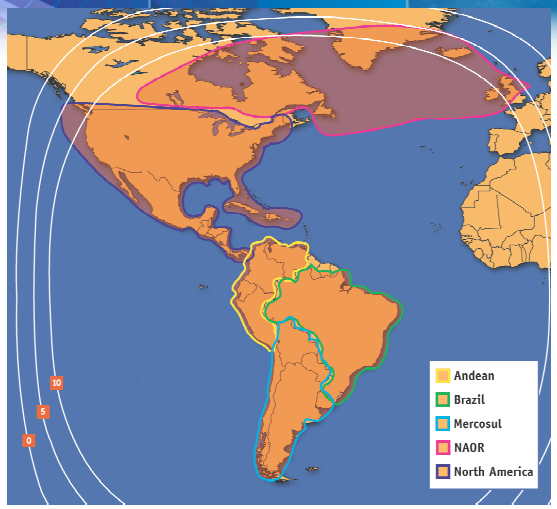
- **Characteristics of the network :**
  - 1 Hub station located in Belo Horizonte (Minas Gerais state)
  - 3300 terminals at rural and remote locations in Brazil
- **In January Ministry of Communications signed with a Brazilian service provider the extension of GESAC project to 5500 terminals**
- **The network will be changed to DVB-RCS technology**

Initiatives of Loral Skynet/Loral Skynet do Brasil to Provide Internet Access to Rural and Remote Areas

- **Loral Skynet/Loral Skynet do Brasil resources and capabilities**
  - Fleet of Telstar satellites with comprehensive global coverage
  - Global network infrastructure
  - Strong regional coverage in Asia, Europe, and the Americas
  - Teleports with access to the world's major communications satellites
  - Unmatched experience and expertise
  - 24 x 7 global support
  - Local support in 75 countries
- **Loral Skynet services**
  - SkyReach^{SM}

Estrela do Sul's Coverage of the Americas

Estrela do Sul at 63 degrees West became operational March '04



Loral Skynet case study : British Foreign Office

- **The Need**
  - To extend the agency's network to reach more than 200 locations with seamless terrestrial and satellite IP connectivity
- **The Solution**
  - Skynet's SkyReach[sm] platform implemented at carrier's UK site
  - Solution design, development and management provided by Loral Skynet working closely with the carrier
- **The Results**
  - Consultative approach fully addressed the need
  - Solution deployed rapidly
  - All sites connected; applications consistent and flexible
  - Communications faster and more cost-effective
  - Solution established a platform for future applications

Loral Skynet case study : Iraqi Elections (1 of 2)

- **The Need**
  - Deploy IP network to 30+ Iraqi sites prior to national elections – in less than 60 days
  - Supplement Iraqi communications infrastructure for district elections and police HQs, military, other government agencies
  - Extremely rapid deployment, within 24 hours for some sites
  - Curfew and security restricted work to daylight only
  - Work could not be scheduled in advance
  - Satellite phone required for site installer to contact NOC to coordination site commissioning

Loral Skynet case study : Iraqi Elections (2 of 2)

- **The Solution**
  - iDirect hub implemented at Loral Skynet Mt. Jackson teleport
  - SkyReach i200 network implemented with forward and return capacity of up to 1020 Kbps
  - Additional personnel assigned to Loral Skynet NOC and SAC for midnight shift
- **The Results**
  - Implementation tightly coordinated
  - 37 sites implemented prior to elections; 60 sites installed to date
  - Site commissioning streamlined to one hour
  - 90% success rate on first attempt
  - Up to 10 VoIP phones per site plus streaming video, Internet browsing, and FTP
  - Plans for 40+ additional sites and an in-country hub

Loral Skynet case study : Tsunami recovery

- **The Need**
  - An emergency communications link between Thailand and the U.K. to support recovery efforts after the tsunami
  - Data collected throughout Thailand to be transmitted from Phuket to specialists in the U.K.
  - Special requirements:
    - Extremely rapid implementation of the link
    - Reliable communications where much of the infrastructure was destroyed
    - Secure transmission of sensitive information between Thailand and the U.K. and possibly other British Foreign Office sites
- **The Solution**
  - Extend the Foreign Office's existing network to serve Phuket
  - Implement a 256 Kbps VSAT satellite communications link and related equipment in Phuket
- **The Results**
  - Link established in extremely short order enabling recovery efforts to proceed

How to reach us

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