



Broadband for Remote Rural Schools

BROADBAND FOR RURAL SCHOOLS SPREAD OVER LARGE AREAS

- Solar Powered
- No Need for Grid Power or Diesel Generators
- Robust Solution requires near zero Maintenance
- Lowest CAPEX & Near Zero OPEX
- Connectivity to PC's, Laptops and Smart Phones

*“E-governance brings empowerment, equity and efficiency. It has the power to transform peoples’ lives. The backbone of my government’s new ways of working will be a Digital India. IT will be used to drive re-engineering of government processes to improve service delivery and programme implementation. **We will strive to provide Wi-Fi zones in critical public areas in the next five years. My government will rollout broad band highway to reach every village and make all schools e-enabled in a phased manner.** Technology will be used to prepare our children for a knowledge society. The National e-governance plan will be expanded to cover every government office from the centre to the Panchayat; to provide a wide variety of services to citizens. Emerging technologies like Social Media will be used as a tool for; participative governance, directly engaging the people in policy making and administration.*

*Despite more than two-thirds of our people living in rural areas; we have not been able to provide adequate public amenities and livelihood opportunities to them. My government is committed to improving the quality of life in our villages, through empowered Panchayati Raj institutions. A substantial part of investment will focus on creating community assets and improving basic infrastructure such as roads, shelter, power and drinking water. **My government will strive to end the rural-urban divide guided by the idea of Rurban; providing urban amenities to rural areas while preserving the ethos of the villages.**” (Address by the President of India, Shri Pranab Mukherjee on 9 Jun, 2014 to Parliament at Central Hall of Parliament, New Delhi.)*

PROBLEMS IN TRADITIONAL IMPLEMENTATION AND EXECUTION OF RURAL ICT PROJECTS

There are several gaps found in the execution of ICT projects for rural areas given the limitations of traditional technologies. Therefore addressing these limitations is critical while developing alternative approaches.

VNL – THE ALTERNATE APPROACH

VNL’s Rural Broadband Solution is a totally solar powered and standalone wireless broadband solution that can be deployed to provides seamless Wi-Fi coverage anywhere. The solution is based on VNL’s unique innovative product design which combines Wi-Fi and backhaul in a single unit.

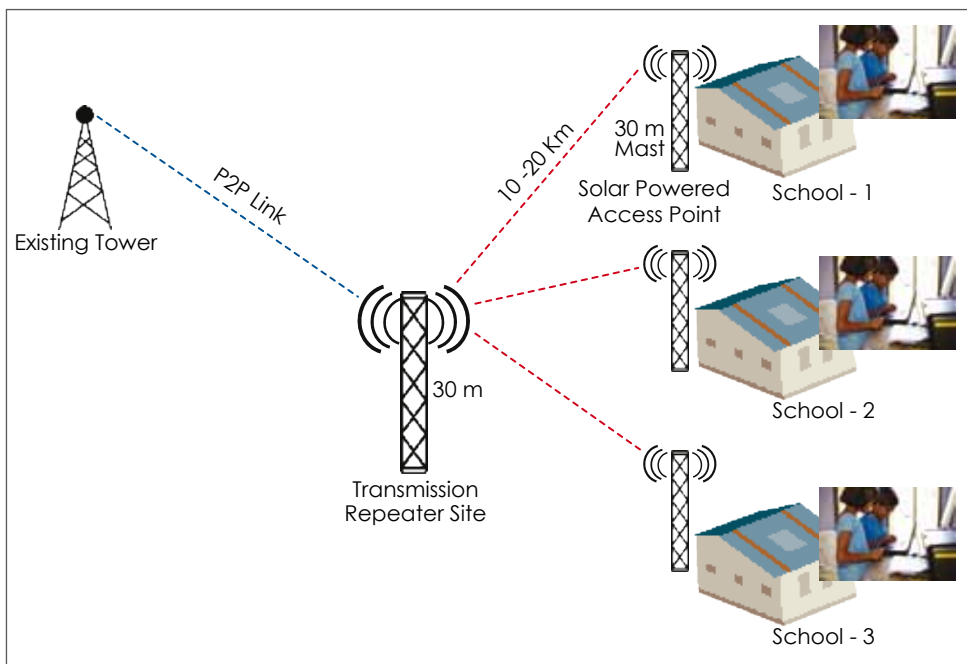
Faster access to the Internet can help bridge the digital divide between rural and urban communities. Faster access to information, connectivity to the outside world, simpler monetary transactions and entertainment is now available with ease. High speed internet is already a proven facilitator for urban web users.

Developing countries need to spur economic activity, bridge the digital divide, enhance public safety and make public services less expensive and more efficient. In the present scenario, rural customers access Internet on dedicated dial-up lines with speeds as low as 56 Kbps. Rural broadband has the potential to connect rural users as efficiently as urban users. It can empower rural public welfare, safety, education & health departments to be more effective.

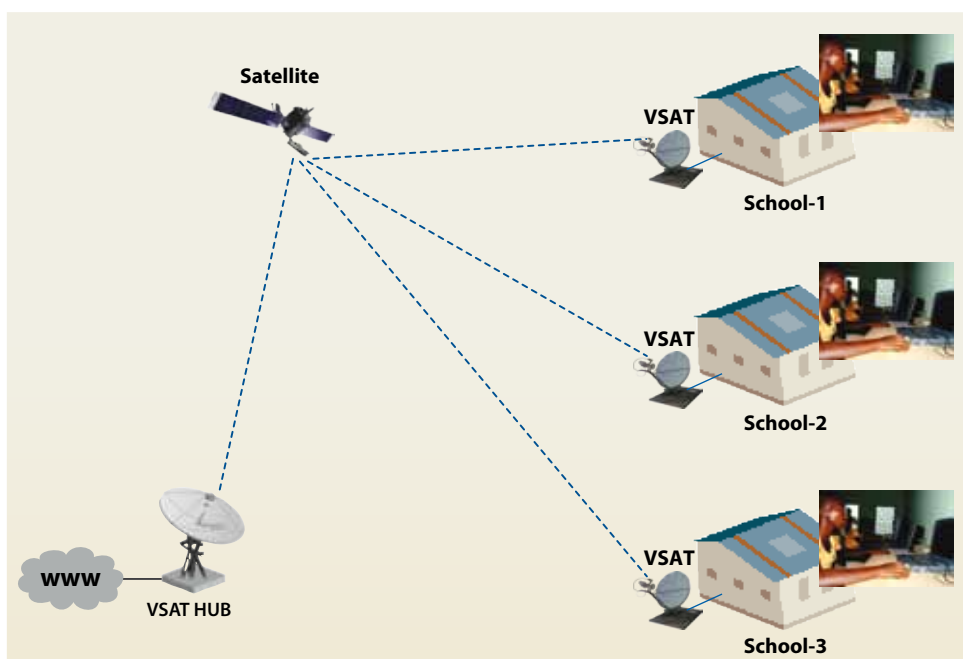
FEATURES & BENEFITS

- *Internet Connectivity via VSAT or Point To Point Radio from the nearest tower*
- *4-6 Computers per School with large 32” wall mounted monitors (Nos. depending upon the no. of class rooms in each school)*
- *2 Computers for Teacher’s & Administration work*
- *Spares for items at the school premises*
- *Training of teachers in operating the system*
- *1 Printer, Scanner & Photocopier*
- *Solar Power for the system*
- *RFID & Biometric Reader*
- *30 meter Mast if needed*
- *Wi-Fi Access Point*
- *Public Address System*
- *All type of spare modules in the school (can be replaced by local teacher)*

DEPLOYMENT TYPOLOGY - 1: VSAT & TERRESTRIAL CONNECTIVITY



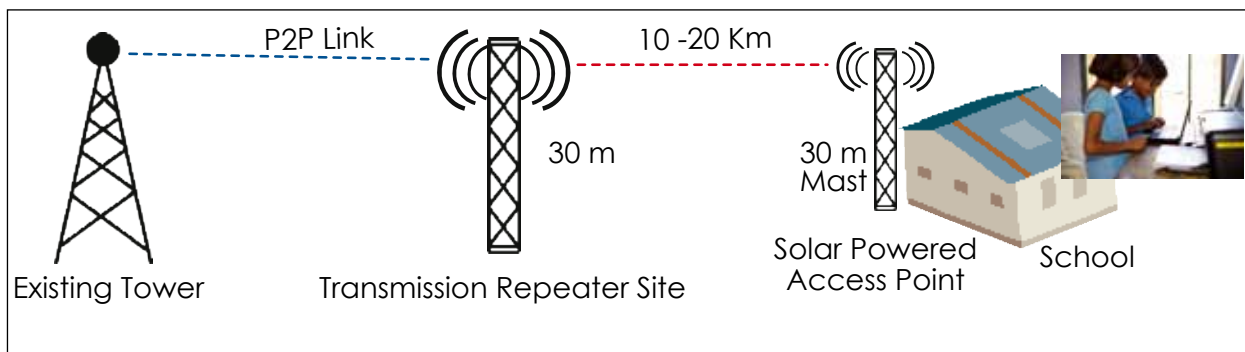
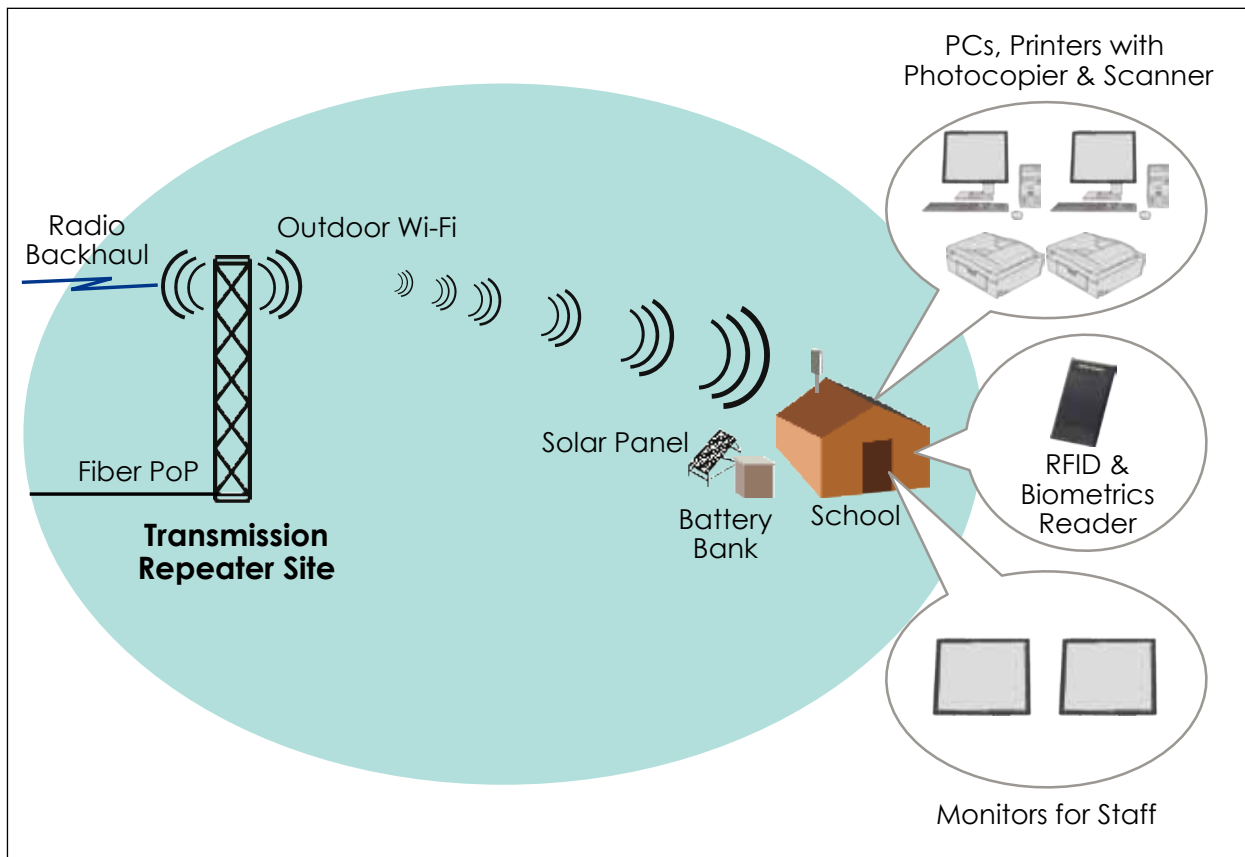
DEPLOYMENT TYPOLOGY - 2: DIRECT VSAT CONNECTIVITY



The key elements in a Rural Broadband rollout are the:

- High speed, high capacity backhaul products for connecting remote locations such as schools and health centers through VSAT or Point-to-Point and Point-to-Multipoint links.
- Wi-Fi BTS to provide extensive 360° coverage.
- Solar powered low CAPEX and near zero OPEX solution that provides up to 72 hours of power backup.

IMPLEMENTATION DETAIL



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