



**Dadeldhura OLPC Deployment and School Networking  
2010 Aug 8-21**

**Background:**

Dadeldhura is one of the program district of OLE Nepal for OLPC deployment. The OLPC deployment in the district has been supported by United Nation WFP. The program is implemented in three of the remote school of Dadeldhura.

1. Janata Primary School, Koral
2. Janajyoti Primary School, Hamtad
3. Samajee Primary School, Haat

**Objective:**

To deploy the OLPC to the three of the program school , update Epaath and E-pustakalaya, maintain class room networking and establish the wireless network connection among the school and to the Internet and to carry out survey of the two proposed new school for OLPC deployment.

**Team:**

Mr. Sunil Shrestha (Network Engineer)  
Mr. Daya Ram Budhathoki (Network Engineer)  
Mr. Prakash Chitrakar (OLE Nepal Intern)  
Mr. Bhim Bd. Dhami (Local Volunteer in Dadeldhura)

**Program School Current Status:**

**Samajee Primary School, Haat:**

The school was not running the program for months due to the lack of functional Laptop charger. A large number of laptop chargers is found to be faulty. This seems to be happened due to the negligence of school teacher and management committee. However, a new teacher Mr. Raj Bd. Ajyear has been appointed. He has also taken the basic computer training. It is recommended to train them properly for great care of laptop charger and lengthening its life. Altogether 48 chargers were found to be faulty. 26 of them were already maintained and returned to the school.

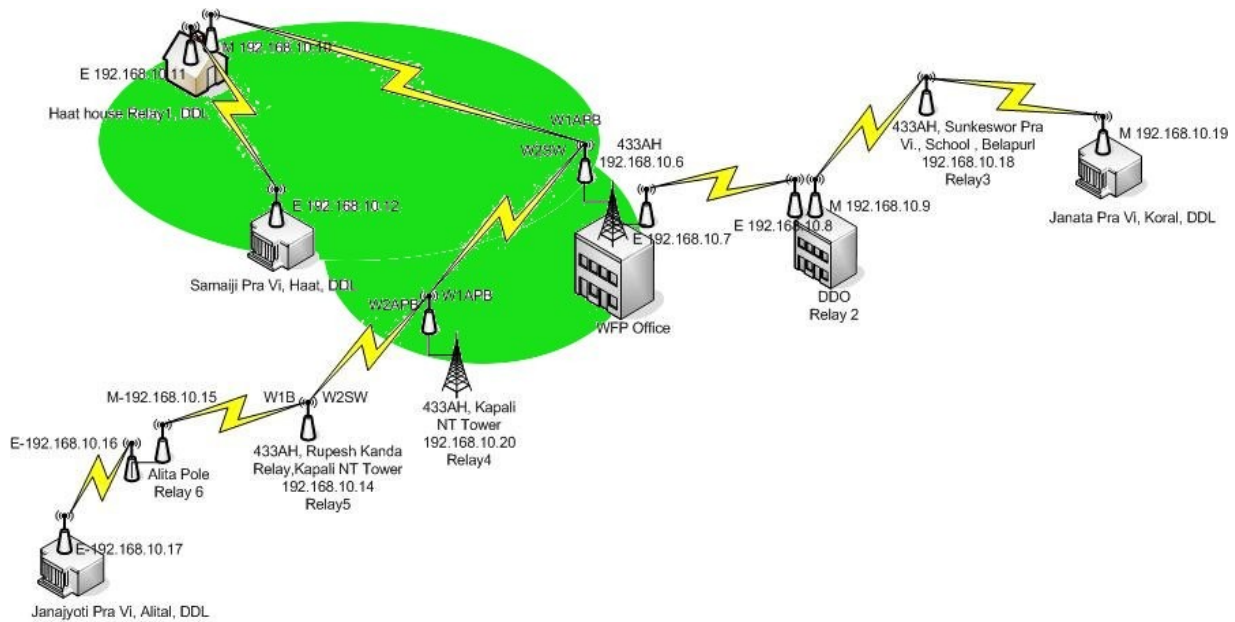
**Janajyoti Primary School, Hamtad:**

The OLPC program is running very smoothly. Janajyoti school, Hamtad is prominent among the program school in Dadeldhura. There is not any problem of laptop chargers. XO and class room AP are also in working condition.

**Janata Primary School, Koral:**

The program is also running smoothly. However 4 XO found to be defective and returned back to OLE for maintenance. No chargers were found to be faulty.

**Current Network Status:**



WFP SO Dadeldhura now has 128 Kbps ADSL connection for providing the Internet connection to the program school. The stable wireless network connection is as shown in the network diagram marked with green color. Now, only the Haat School Samajjee is connected to the Internet. Since mobile access to the School is very rare, we have installed the VOIP phone so that we can communicate from OLE Nepal through the Internet. In order to communicate with the WFP SO, the voip soft phone has also been configured to some of the staff's PC.



*Fig: Network team tuning the Antenna in Kaphali NT tower*



*Fig: Haat Engenius Radio made faulty by Insect insect*

Kaphali and WFP SO network connection is also stable and working.

The network team is unable to connect the Hamtad School to the network due to very bad weather and road blockade due to land slide. Moreover, its very difficult to climb the tree and maintain the Antenna during rainy season.

The Rupeshkada Relay to Hamtad is also on the bare tree. Ncell is soon going to build its tower near our Relay point in Rupeshkada. Ncell has agreed to provide the space and power for our Antenna on their tower. We will use Ncell tower for our Relay to Hamtad school.

To connect Koral school to the WFP SO and hence to the Internet we have only one option of using Sunkeshor school Belapur as a relay point. Since the school is still deprived of electricity we were unable to carry the networking task to Koral. Belapur school is going to have 3 computers set that is donated by WFP as soon as it will have electricity. We have asked the Belapur school to convince the concerned authority for electricity as early as possible.

### Networking Survey for two proposed school:

OLE Nepal has proposed two new school Saraswati Pra. Vi Kailpalmandu and Selaling pra vi, Alital for future deployment. The network team performed the basic survey of these school for wireless connection. Saraswati school kaipalmandu could be connected to the WFP SO through the Koral's school relay point. Similarly the Selaling school could be connected to WFP SO though the Hamtad School. It need one extra relay point near Selalaling school.

### Replaced Network Equipments:

s.no.	Place	Device	Remarks
1	Haat School	Engenius	Found faulty(Short circuit due to Dhamira Insect) and replaced with new one
2	WFP SO	Mikrotik Router Board	Bad Ethernet POE (might be due to lightning) replaced with workable one.
3	Kaphali Relay	Mikrotik Router Board	Mother board found to be faulty, replaced with workable one.

### Equipments brought back:

s.no.	Place	Remarks
1	Haat School	22 chargers and 2 XO
2	Koral	4 XO including 1 new XO
3	WFP SO	Dell Server
4	Kaphali NT tower and WFP SO Tower	2 Mikrotik Routerboard 433AH

### Recommendation for protecting the Network devices:

1. Use Surge protector though it little bit expensive.
2. Need proper Earthing for the device
3. Proper shielding with Waterproof tape in POE washer.

**Computer LAB Setup in RupeshKada school (Relay point):**

WFP donated 3 computer sets to Rupeshkada Janasewa Pra. Vi. All the computers are installed with whole Epaath bundle and other necessary software for daily uses. Two of the computers are also installed with Free and Open source Operating system, Ubuntu. The team briefly taught and demonstrated the Epaath lessons and uses of computers to the Head master. Mr. Chandra Bhandari.



*Fig: computer Lab in Rupeshkada*

**OLPC Deployment:**

The following number of XO has been deployed to the respective school. All the XO are updated with latest Epaath,

s.no	School	XO provided	Bags	Router	Charging Rack	Shortfall XO
1	Janajyoti Pra vi. Hamtad	30	30	1	3 Big	-
2	Samajjee Pra vi. Haat	17	17	1	1 Small	6
3	Janata Pra. vi, Koral	24	24	1	1 big 1 small	6



**Conclusion:**

Despite the bad weather of Dadeldhura and faulty wireless devices the trip becomes somewhat fruitful from the perspective of Networking. WFP ADSL connection now become usable and advantageous. It has been now used by Haat school for Internet connection and voip phone communication to OLE Nepal and WFP SO Dadeldhura. The team face great panic due to bad weather and faulty devices in Kaphali NT tower. It is always recommended to have a trip to Dadeldhrua before or after the rainy season.