

# WoredaNet-Ethiopian Government Network

## What is WoredaNet

ETHIOPIA has a federal system of Government with a population of 73.9 million. The Federal system has 9 national regional states which are divided into administrative zones and Woredas. “Woreda” is an administrative division in Ethiopia (managed by a local government), equivalent to a district with an average population of 100,000. Woredas are composed of a number of *Kebele*, or neighborhood associations, which are the smallest unit of local government in Ethiopia. Woredas are typically collected together into zones, which form a *Kilil* (Regional government administration). The Name WoredaNET comes from “Woreda”. Currently there are around 710 woredas.

WoredaNet is a government network connecting more than 611 Woredas, regional and federal government offices across the country (the name woredaNet comes from “Woreda”). WoredaNet is a terrestrial and satellite-based network designed with the primary objective to provide ICT services such as video conferencing, directory, messaging and Voice Over IP, and Internet connectivity to the Federal, Regional and Woreda level government entities. The goal of WoredaNet is to establish a multi-service IP-based service by the use of Terrestrial Broadband and VSAT infrastructure for the delivery of services to government and the citizens. The goal is towards the improvisation of Federal and Regional Government administrative efficiency, effectiveness and productivity, as well as, information provision and service delivery to the public at large.

## Implementation of the WoredaNet project

The WoredaNet implementation project was part of a broader ICT initiative of the government to promote sustainable development through a massive program of ICT application aimed at empowering the citizens. The major objectives of the woredaNet includes

- To bridge the digital divide between urban and rural communities.
- To provide knowledge and information to citizens.
- To build organizational capacity at all levels of government.
- To provide the lowest level of government with accurate and timely information.

There were various challenges to rollout the woredanet project. Poor Telecom Infrastructure was the major one. The WoredaNet project required a means of sending and receiving large volume of voice, video and data traffic around the country including remote parts of the country; which was beyond the capacity of Ethiopian Telecommunication Corporation (The incumbent service provider) network; so improving the telecom infrastructure should be done side by side with the implementation of the woredaNet project. In addition to this, deploying Networking and video conferencing

equipments at each woreda was a challenging task given the nature of Ethiopia's terrain and a large percentage of the implementation is done in extremely remote towns. Together with these absences of the required human resource to manage and operate the network in remote areas and lack of electric power in some woredas were among the major challenges to realize the project. Therefore implementation of the Woredanet project has required the government to solve these challenges. The scope of the WoredaNet project includes;

- install and commission broadband and VSAT equipment, and multimedia infrastructure deployment ,
- supply and installation of Networking and video conferencing active devices in 611+ woredas and perform end-to-end connectivity and functionality tests for all the technologies included in the project; and Furnish the woredas centers with the necessary furniture ,
- Install Diesel generators in non-electrified areas,
- Select and provide mentorship and operational training for the final possessors of the system in the 611+woreda sites,
- Preparing rooms to house the equipments and providing services in 600+ woredas,

The network has reached even the most remote areas of the country which are found up to three days walk from the nearest road or three days drive from the nearest town. In some places the implementation has required air drops managed by the Ministry of Defense.

The WoredaNet uses both VSAT and Terrestrial links to connect to the Internet and to other WoredaNet sites. Since nearly half of the Woredas have no terrestrial connection with Addis Ababa, the primary means of communication is VSAT. The VSAT have a central hub at Ethiopian Telecommunication Corporation ( ETC) in Addis Ababa.

The terrestrial link supports 1 Mbps upstream data rate , while the VSAT link supports 512 Kbps in order to carry outgoing video, voice and application data simultaneously. The Downstream traffic for VSAT supports a total of 32Mbps which is shared by all the VSATs connections.

## Organization of the WoredaNet

The WoredaNet is under the direct management of Ethiopian ICT Development Agency (EICTDA). The Agency is responsible to device rules and regulations on how to use the WoredaNet Infrastructure. The WoredaNet consists of National Data Center (NDC in Addis Ababa under EICTDA; 11 regional Data centers at the regional capital cities of each national states and Addis Ababa and Dire Dewa City Administrations ; and 611 Woreda centers located at the main towns of each woreda . Eight of the regional data centers are connected to the National Data center through terrestrial links while 3 of them connected through VSAT network. Most of the Woreda Centers are connected to the National data center through VSAT.

*The NDC is the command post and the heart of the woredaNet* where all the services are being provided. In relation to the WoredaNet, the NDC is responsible for,

- centrally manage the WoredaNet,
- monitoring and supporting the woredaNet infrastructure,
- coordinate the activities of the regional and woreda data-centers.,
- provides maintenance and training supports .

The Regional Data Centers are under Regional Capacity Building bureaus of each region. In addition to serving as a woreda center Regional Data Centers are responsible for coordinating and controlling the WoredaNet services in their respective regions and provide over all support to woreda centers with in their region.

At its lowest level, WoredaNet has the Woreda Centeres (Woreda Sites) at each Woreda , which directly provide services to the users. They provide Video conferencing, internet and other WoredaNet services. The centers have Video conferencing halls and rooms to house the networking equipments and to provide internet and other services. Each site has a 42" flat screen Plasma television, voice-sensitive microphones and Camera for video conferencing, 12-24 data ports, an IP phone and at least 2-5 computers. The centers also provide telephone and fax services in remote areas where access to such facilities is difficult.

These Woreda Centers serve to all government offices as well as public institutions with in the woreda. Each Woreda Center site has at least two ICT Staff. Staffs at the woreda center, In addition to managing the woredaNet services they are charged with the responsibility of providing ICT training to woreda-level government offices.

## Description of impact on beneficiaries

Currently the wordanet provides various ICT services. Video conferencing, internet and messaging are the most prominent services provided by the WoredaNet.

### I. Video Conferencing

Video-conferencing service (VC) is one of the most utilized services of the WoredaNet. The video conference service is used for various purposes. The most common one includes Government Conferences, Court services, training and distance education.

#### 1. Conferences and meetings

Various government institution use the video conference service of the wordaNet to conduct conferences and workshops (between federal and region, region to woredas, woredas to zone etc.). The service has helped to make effective and frequent communication among different sectors and tiers of government administration. The service has facilitated provision of timely information to the lowest level government institutions and reduced travel and administrative costs for sharing information and increase collaboration among government institutions. This has helped to improve the efficiency of the government at all levels by allowing better use of executive time and speed up decision making and contribute to improve the capacity of government institutions to provide better services to citizens.

#### Conference and training services conducted using the WoredaNet's video conferencing services in 2006-8

		Number of participants	Number of hours
1	Meeting	8188	320
2	Education and Training	173665	1793
3	Workshops and seminars	4725	72
	Total	186578	2185

## 2. Court Services

Ethiopian Courts are arranged hierarchically from the lower structure woredas to zone, region and the federal government level. Based on the types of the issue, these courts give services to citizens. The videoconferencing is used for court hearings held at the Federal Supreme Court, as well as region and zonal -level courts. Providing Court services using VC has helped citizens by avoiding travel from woredas to zonal and regional centers and Addis Ababa. Instead of traveling long distance, the customer can use the video conference services of the WoredaNet near/in his/her home town to attend the court conducted at a zonal, regional center or Addis Ababa. This has helped citizens to avoid inconveniences and unnecessary expenses as well as to get faster responses for their cases. The table below shows the usage statistics of the WoredaNet for court services;

### Court Services Conducted using WoredaNet Video conferencing service in 2007/8

	Name of the Court	Number of cases	Number of hours	Participating Sites
1.	Federal Supreme Court (In Addis Ababa)	429	619	Bahrdar, Awasa, Dire Dawa, Mekele, Gondar, Jima , Desie, Adama, Harar, Merahabete, Debre Brhan, Ambo, Debre markos
2	Tigray Region Higher Court(Mekele)	5200	2436	Adi Gudem, Humera, Maychew, Shire,Alamata, Aksum, Adwa, W'qro, Endeslasi, tenben, Abiy Adi, Adigrat
3	Amhara Region Higher Court (Bahrdar)	817	1000	All Amahar zones and most of the woredas
	Total	6446	4055	

### 3. Training and distance education

Various trainings and distance education programs have been conducted using the WoredaNet video conference service. For instance, in 2007/08, the WoredaNet is used to provide trainings for woreda administrators, Public servants, judges and prosecutors. Using the video conferencing the Instructors at the center provides training for trainees found in different woreda centers spread across the country. This has reduced costs associated with moving the trainees to a central place and sending instructors to many places. This has created an opportunity to train many peoples at one time and at a reduced cost. Training public servants using videoconferencing has also helped to reduce service shut downs that may result from moving public servants long distances away from their working area for training. In general the system has helped to improve the services to citizens by providing effective training to the public servant.

In addition to short term trainings, the system has also used for distance education services. For instance the ministry of justice uses the video conferencing system to upgrading more than 2000 legal professionals to master level in 7 central woredas all over the country; Bahrdar University has used the system to support its undergraduate distance education program by providing tutorial to its students in 7 central woredas.

### II. Internet and messaging

Currently various woredas and other administration unites became users of internet and e-mail services using the WoredaNet. For instance most of the Amhara region woredas has an e-mail account ([http://www.amhcbb.gov.et/contact\\_us/woredanetcontact.htm](http://www.amhcbb.gov.et/contact_us/woredanetcontact.htm)); In 2007/8 more than 30,000 e-mail messages are exchanged between regional , zonal and woredas administrative offices of Tigray Regional government using the messaging services of the WoredaNet.

Woreda administrative organs use the e-mail services to communicate reports and exchange information with their counter parts at zone and region. Previously, official reports would take months to reach from woredas to regional capital and then to the federal ministries. Thanks to the e-mail service by the Woredanet the problem is reduced greatly. The woredanet service has also contributed a lot to report incidents such as epidemic diseases, early warning signs of famine etc, which need urgent action before a crisis had developed.

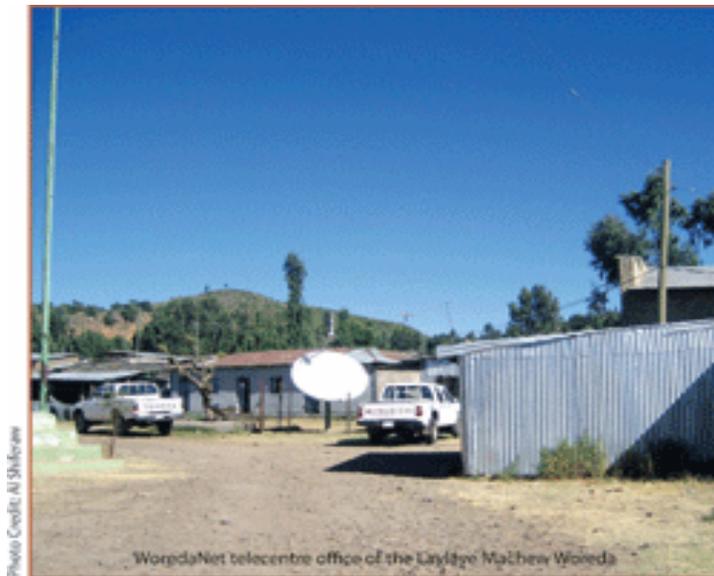
In some places in addition to serving government institutions the WoredaNet also serves as a community internet facility, where the public get access to the internet and ICT training.

In general, the e-mail services by the WoredaNet has contributed for efficient communications among tiers of government which in turn has contribute to administrative reform and better services to citizens.

### III. Other ICT Services

In addition to placing the infrastructure the WoredaNet project has enabled to build a team of ICT experts at almost every woredas through out the country. As part of the woredanet project more than 2,000 people were trained in advanced networking skills. These trained people in addition to managing the network provide various ICT services to their respective government offices, including providing advices in procuring ICT equipments and provide basic computer trainings

The over all infrastructure lays the foundation for implementing e-government services and has created favorable condition for utilizing ICT for development works at the grass root level.



WoredaNet Center at one of the Woredas



## Courts Through VC



Customers attending a court using VC (Judges in Addis Ababa)

4/21/2009

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Meket wordas (Amhara Region) experience sharing with other wordas using VC