TV WHITE SPACES BROADBAND PROJECT IN RURAL KENYA: CONNECTING NGOS, GOVERNMENT AND COMMUNITIES

As the coordinator for the Laikipia County Red Cross in Kenya, Mr. Anthony Kuria is responsible for liaising between the Laikipia County Red Cross branch outside Nanyuki and its nearby sub-branches, as well as the Kenya Red Cross Society's headquarters in Nairobi. The Laikipia County Red Cross branch and its four sub-branches provide county residents with disaster relief and community empowerment services such as support to families that have lost homes to fires (one of the most prevalent disasters in the region), flood and drought damage relief, automobile accident response and proactive education on topics such as nutrition and first aid.

The Red Cross also provides a hallmark service in disaster situations in attempting to locate and connect missing people with their families. This has traditionally been done using Red Cross Messages, a paper form mailed via postal service to other Red Cross branches. This was a lengthy process – Red Cross Messages would be sent between multiple branches until the family member was located; then the news would take a few days longer to travel back to the initiating branch by mail. Email has expedited the service tremendously, enabling instant communication between Red Cross branches and families.

There is a hitch, however. Not all local areas have Internet access – or even electricity. As a result, expensive and time-consuming travel, phone calls and postal mail are still necessary means of communication between many branches. "We are hoping the TV white spaces technology will help improve communication with our sub-branches and other Red Cross offices by providing Internet access and solar power in more locations," said Mr. Kuria. "The community at large will benefit from the Wi-Fi and electricity available at the Red Cross sub-branches, if they get connected. Having broadband available at additional locations will help us do our jobs more effectively and serve more people in need."

The vision of increased connectivity delivered by TV white spaces technology for organizations in rural communities like the Red Cross extends throughout Africa, beyond the Mawingu pilot in Kenya. Mawingu is part of Microsoft's 4Afrika initiative to improve global competitiveness in Africa. In collaboration with the government of Kenya's Ministry of Information and Communications and Indigo Telecom Ltd., the pilot delivers low-cost wireless broadband access to previously unserved locations near Nanyuki, Kenya. The wireless technology used in the pilot is called dynamic spectrum access, which enables wireless devices to opportunistically tap into unused radio spectrum to establish broadband connections. The project in Kenya uses these new technologies to create broadband connections over the unused portions of wireless spectrum in the television frequency band (so-called "TV white spaces").

The initial installation near Nanyuki currently includes eight customer locations including schools, clinics, libraries and County Government Offices. Employees at the Laikipia County Government Office will also soon be enjoying Office 365 accounts. In early 2014, an additional 33 end user locations will be added to the network, including several more schools and businesses in the area.

Providing broadband to rural areas of Kenya is critical to driving prosperity in rural areas, as well as across Africa as a whole. It gives children and adults a new way to experience learning, and rural communities the ability to connect to the world, improving rural county areas opportunities for economic development via e-commerce and small business growth.