Factors Contributing to The Rapid Growth of Kenyan Optical Fiber Network Infrastructure

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Summary

In the recent past, Kenya has experienced a rapid growth of the optical fiber network. In this paper we present the factors contributing to the rapid growth of Kenyan optical fiber network infrastructure. Currently, Kenya is served by four undersea cables TEAMS, EASSy, SEACOM and LION2. The landing of these four undersea cables at the Kenyan coast has been a major boast to the information and communication technology (ICT) industry. Apart from the landing of undersea cables, the rapid growth of the optical fiber infrastructure network in Kenya has been attributed to many factors which we have discussed in this paper. In major Kenyan towns, Fiber-to-the-home is considered the home user's dream as it would enable service providers to offer a hefty selection of services including high-speed Internet, broadcast cable television, direct broadcast satellite television, and additional two-way video-based services. This has lead Telecommunications industry in Kenya to revolutionize leading to robust and wide spread optical network.

Key words:

Optical fiber network Infrastructure, optical fiber, rapid growth

1. Introduction

Optical networks are high –capacity telecommunication networks based on optical technologies and components that provide routing, grooming and restoration at the wavelength level as well as wavelength based system.[1].Optical network, based on emergence of the optical layer in transport network provide higher capacity and reduced costs for new application such as internet ,video, and multimedia interaction and advanced digital services[2].Due to many advantages of the optical fiber many companies in Kenya have raid the optical network this are Kenya Data network(KDN),Jamii Telecom,Tecom orange Kenya ltd and Kenya power. KDN has deployed the largest fiber optic network in the region so far. With over 1000 Kilometers of Metropolitan fiber optic cable in Nairobi, 150 in Kisumu and Mombasa and 75 in Nakuru, Eldoret and Thika, KDN has the key towns in Kenya covered [3].Jamii Telecom (JTL) has deployed Next Generation Metro Fiber Networks Countrywide. It has also built a National DWDM Backbone connecting all the Major Towns in Kenya and the borders to Tanzania and Uganda. The National Backbone has been provisioned on the highly secure OPGW fiber on Kenya Power & Lighting Co Ltd (KPLC) HT power lines [4].The underlying factors which have lead to this players laying the optical network infrastructure in Kenya are hereby outlined.

2. E-governance

The Kenya government has been making significant attempts to make its services and information on the Internet available in the recent past. The success of these efforts depends to a great extent, on how well the targeted users i.e. the citizens in general make use of the services and information. The transition period from the KANU government to the NARC government(December 2002), marked the full realization of the e-government aspect, as the nation was set to tap the great potential of ICT-in service delivery to its subjects. Nonetheless, it was in January 2004 when, after the executive (cabinet) session, that a Directorate of e-government was established. The newly created department had the duty to draw the plan of action; for future ICT implementations [5]. Direct effects of e-government include cost effectiveness in government and public operations, significant savings in areas such as public procurement, tax collection and customs operations, with better and continuous contacts with citizens, especially those living in remote or less densely populated areas [7][10]. The achievement of e-Government is one of the main priorities of the Kenyan Government towards realization of national development goals and objectives for wealth and employment creation. Effective and operational e-Government will facilitate better and efficient delivery of information and services to the citizens, promote productivity among public servants, encourage participation of citizens in Government and empower all Kenyans. The government as created many websites for services delivery to its citizens [8]. All this factors have lead to rapid network to remote areas too.