Abstract

An intervention approach in introducing new online fiber optic communications labs in an operating environment where resources for establishing new conventional labs are limited is presented. The focus of this educational intervention is on the technological aspect required to develop and deploy the labs online. The developed labs demonstrated some of the distinctive features of fiber optic communications compared to the conventional electronics copper wire communications media. Telecommunications kits from Emona – FOTEx, National Instruments – ELVIS II hardware platform and MIT iLabs Shared Architecture remote lab framework were used to develop and deploy online fiber optic experiments. The developed labs have provided means for students to perform relatively new lab work anytime, anywhere. The sharing aspects extend their accessibility to other institutions with similar operating environment and limited technical know-how on managing remote labs.
Development of Online Optical Fiber Communications Experiments using the Interactive ILabs Shared Architecture

2. UDSM 2013 UDSM Facts and Figures
3. SARUA 2011 UDSM Student Statistics
5. Song S 2011 African Undersea Cables
16. NI 2011 National Instruments: Lab VIEW

Index Terms

Computer Science

Communications
Keywords

MIT ISA, Optic Fibers, FOTEx, ELVIS.