

New Trends in Optical Communications

Moustafa H. Aly

College of Engineering and Technology, Egypt

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Abstract

The lecture include: Needs of optical networks, Fiber maps around globe, Definitions of: Optical Communications, Light and Optics, Laser and Fiber, Fiber Communications and Free Space Optics. The lecture illustrates: Optical Communication System and Submarine Cables. This is followed by the description of the great revolutions in this field, which are: Optical Amplifier (~1990) 1st Revolution, Fiber Bragg Grating, FBG (~1985), 2nd Revolution, and Visible Light Communication, VLC ~ (2010), 3rd Revolution. Applications including Fiber-To-The-Home FTTH and Endoscopes or Fiber Scopes are also explained.

For more understanding, some videos are to be displayed showing optical fibers, fabrication, undersea cables, cables repair and VLC.

Keywords: Optical Fiber Cable, Optical Amplifiers, Fiber Bragg Grating, Visible Light Communications.

Biography

Moustafa H. Aly has completed his PhD at the age of 34 years from Alexandria University and postdoctoral studies from Strathclyde University (Scotland). He is professor of Optical Communications at College of Engineering, a former dean of engineering, Arab Academy. He has published more than 250 papers in reputed journals and specialized conferences. He is a co-supervisor for more than 125 M.Sc. and Ph.D. students, who already obtained their degrees. He has been serving as a reviewer of many ranked journals.