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Next level for Fiber Optic Projects deployments

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Abstract — **This article is about a new concept of DUENSET, Flexible Networks, which it explains how the Fiber Optic installers can move to the next level of their execution works for multiple customers in Fiber Optic deployments. Deployments contains all types of Fiber Optic deployments, from backbones to FTTH networks, from Metropolitan Fiber Optic Networks to Rural FTTH.**

Keywords: fiber optic deployments; flexible networks; efficient fiber optic network deployments; fiber optic installer; metropolitan fiber optic networks; future fiber optic deployments.

I. INTRODUCTION

Everybody wants to be more efficient and productive in its work. In Fiber Optics area the technology and digitalization are so closed but not often used unfortunately. How a Fiber Optic installer can be more efficient and productive nowadays? We try here to explain a new concept and model for the execution of similar fiber optic networks for different customers in different or the same areas by the same fiber optic installer: Flexible Networks.

Can be used technology, digitalization, Artificial Intelligence or robots in the Fiber Optic works? I will use my experience and scanning many fiber optic installers at international level, I will develop this model which is future proof about how the fiber optic installer will grow in the near future.

The deployment of Fiber Optic networks had been increased and evolved in the last 10 years, while both FTTH and FTTB networks had increased significantly in the last years. By September 2018 it was estimated that the coverage of FTTH/B reached 46.6% in the EU30 and 70.4% in EU28, according to the last IHS FTTH Market panorama report from FTTH Europe Conference in Amsterdam in March, 2019.

This report shows a clear upward trend from September 2017 where the estimated coverage rate in the region was 39% in the EU30 and 27.2% in the EU28.

Estimates plan for around 187 million home passed for FTTH in 2023 in EU28 with fiber becoming closer to the end-user with FTTH accounting for 63.8% versus 36.2% for FTTB.

The owners of Fiber Optic Networks and deployments were moving from incumbent telecom operators to alternative telecom operators, municipalities, infrastructure operators or others private companies.

The Fiber Optic installers had been changed in the last 10 years a lot also.

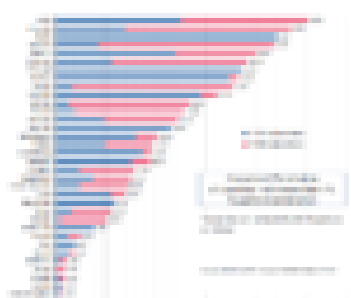


Fig. 1 Households Penetration of countries with more than 1% FTTH penetration in EU28 – IHS FTTH Council Europe [1]

Romania has a lot of fiber optic cables installed in the country with hundreds of ISPs along telecom operators running the fiber optic networks.

This states with a good experience in fiber optic network deployment in the country is a very good support for analyze what is good and not so good for future fiber optic deployments.

This document presents a new concept of DUENSET, Flexible Networks, explained how with some guidelines for any fiber optic installer which want to be more efficient and productive in multiple fiber optic deployments and it indicates some research directions for developing this model by innovation in fiber optic deployments using technology.

The guideline and research directions are to be followed in the next chapters in all major categories of fiber optic deployments with indications of technologies to be used for each section, HR and tools. Executive resides network design, fiber optic

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