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NEW REALITIES
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# HOW DIFFERENT FIBERS TECHNOLOGIES IMPACT MODERN TELECOMMUNICATIONS

Traffic booming requires more transport routes (terrestrial and submarine) and more fibers to carry it. The common understanding is that the fiber itself is wire without any specific features than carrying an optical signal. The reality is far different from this!

Optical fiber is a very specialized medium for different applications, nowadays there are different type of fibers with the physical difference in the glass and in the mechanical specs designed to adapt to a specific applications.

Submarine cables, especially the latest generation, are relying on ultra-low loss fiber to minimize the attenuation and optimize the number of amplifiers along the route (the so-called G.654 family). This leads to specific terrestrial fiber requirements as well once they land and are backhauled to the large Data Center and Internet Exchange.

Hyperscale's Data Centers are another driver for specialized Fiber Technologies such as High-density cables. High-density cable carries from 832 and up dark fiber pairs to satisfy the appetite of large OTT's and are in fact becoming the choice for any DC-to-DC connectivity. Such several fibers require a different approach to splicing and X-connect compared to the traditional 48 or 144 DF pairs cables as bending capabilities. The Appearance of new fiber and cable technology affects not only the Carriers and the users but also the Cityscape. The usage of High density or low-density fiber can affect how much digging is done in the cities.

My presentation will exploit all the above aspects with use cases faced my daily job and export the best practice used and future challenges.

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