How to Aggregate All Services - Including Mobile -
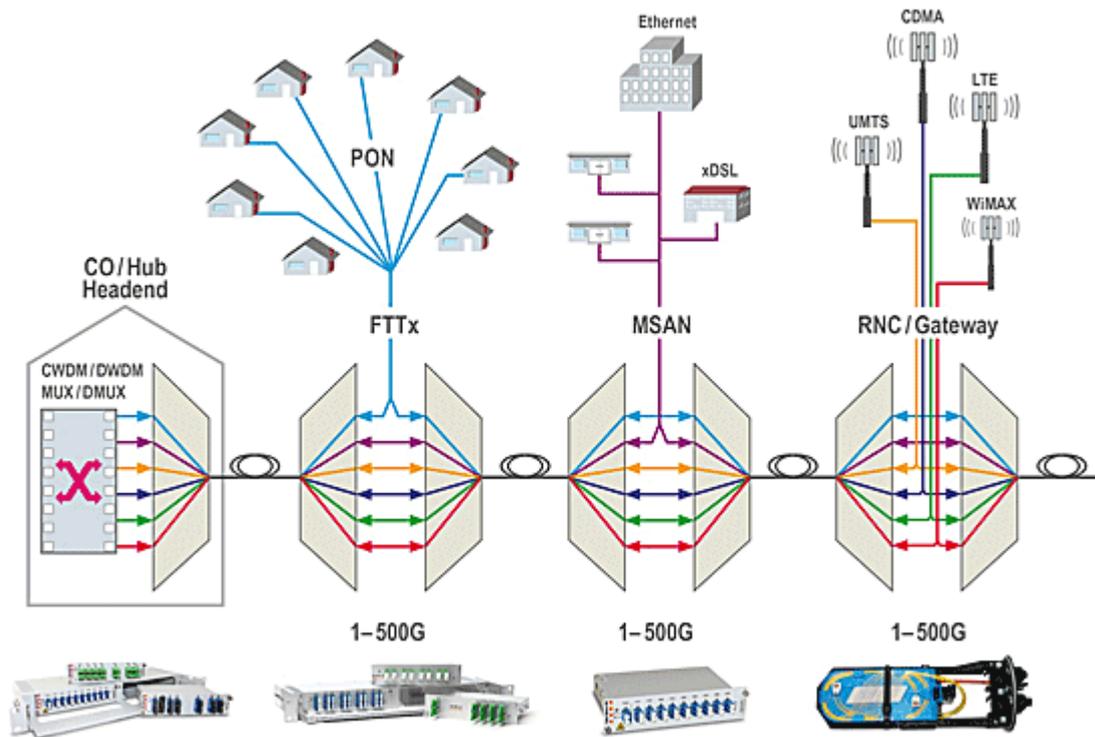
1 Overview

Many fixed and mobile operators are looking at how they support the plethora of bandwidth demands that show no sign of slowing down and are understandably focused on the edge of their network. All service providers are expending huge amounts of effort and resources deploying new NGA technologies; PON, LTE, VDSL, etc - but don't forget the middle mile and how you backhaul these growing bandwidth needs!

Accepted thinking is that fibre is the best technical solution to provide this much needed bandwidth. However, many operators are reluctant to tackle the complexities of deploying expensive active DWDM networks that are often seen to be the de-facto standard way of meeting these needs.

With the EU commissioner and regulators wanting incumbent service providers to address unbundling fibre infrastructure, Telekom Sovenije already doing so, service providers are considering new business models that allow access to fibre pairs ever closer to the end customer.

On the other hand, these same operators are driven to devise solutions that are future proof and are capable of expanding to meet not just today's but also tomorrows virtually assured thirst for ever more capacity. Understandably, these operators want to avoid making costly infrastructure investments without a quick & measurable return on investment. And 40G & 100G interfaces are on the near horizon - so the solution must also support these emerging standards.

Therefore, what is needed is a new way of thinking that is simple to implement, doesn't require employment of high skill (high cost) planning experts, and allows any service provider to easily supplement new bandwidth without adding complexity or sequestering limited rack space and infrastructure investment budgets.
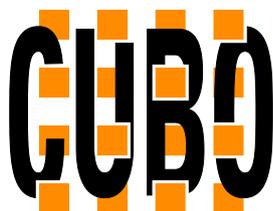
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2   Technical Overview

If you need to rent fibre, you strive to be frugal. Thus each leased fibre pair must handle multiple services over each link whether via 1G, 10G, 40G or even 100G interfaces all the way up to 500Gbps per fibre pair: 40 x 10G + 1 x 100G.

Using CUBO's Network Cubes, mobile service providers may link their BTS/NodeB/LTE sites while fixed service providers backhaul their DSLAM/MSAN/xPON traffic. Maximize investment by using costly fibre more effectively whilst easing demands on the metro/access network. CUBO's WDM network solutions support up to 100G per lambda and are agnostic to the protocol and transport speed. Service providers, whether renting or owning fibre, can remain confident of being able to support any mix of complementary, new and future access technologies including GigE, 10/100G, SDH/Sonet, CPRI etc.

CUBO's Network Cube MUX's are completely passive; Telcordia approved for outside plant (-40 to +85C); and are compact enough to conveniently fit into virtually any splice box that goes into the ODF.

Whether boosting capacity in crowded street cabinets or adding services and subscribers at central offices, CUBO have the answer.

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