

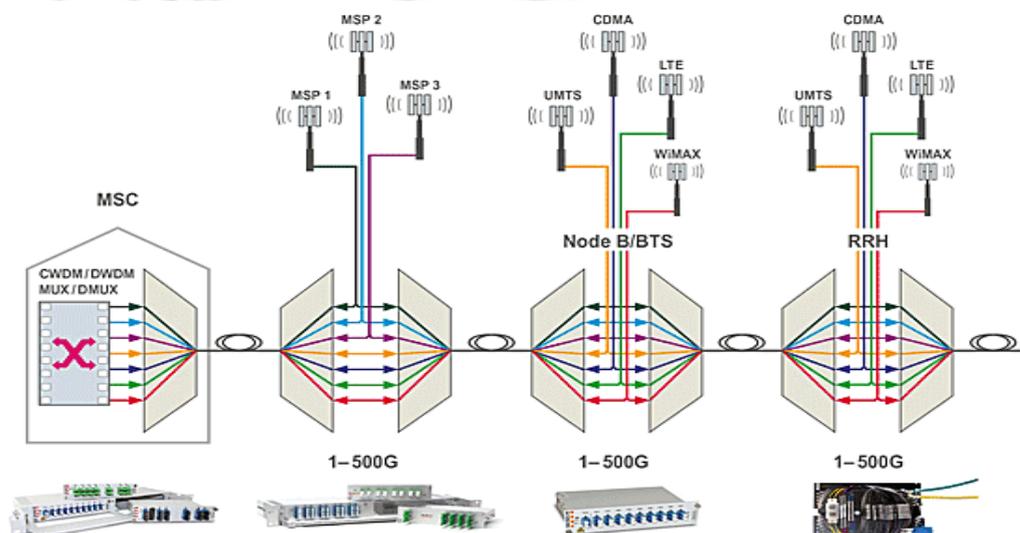


Solving Mobile Backhaul Challenges

1 Overview

Many Service Providers around the world are struggling to come to terms with how they simply add more high speed bandwidth to support services to their networks cost-effectively. The industry is deploying 4G networks, forecast to need to support 1000 times more data traffic by 2020, with Subscribers using more and more high speed data services driving the 'data tsunami' on to the ill-prepared shore of Service Provider networks. It comes as no surprise to learn that Android and Apple users consume the most data; 582 megabytes per month for the average Android owner and 492 megabytes per month for the average iPhone user. (June 2011) Service Providers are looking to grow bigger and more capable middle mile / cell site backhaul networks. With the advent of LTE to support subscribers insatiable demand for faster, higher bandwidth data services to their smart phones, this growth will only accelerate creating even more bandwidth pressure in the mobile backhaul.

Fiber optics is the preferred infrastructure for backhaul, but it's important to focus expenditure and limited resources to best effect. Quote from Ventura in 2010 "use whatever means you can to reduce costs". What is needed is a simple solution that allows any Service Provider to easily upgrade and grow, to add new bandwidth without adding complexity, neither impacting on limited rack space nor at too high a cost.



2 Technical Overview

If you rent fiber you would only have to rent 1 x fiber pair (or single fiber) & deliver multiple services over each fiber and you can upgrade 4-8-16X capacity from MSC to NodeB/BTS or from NodeB/BTS to RRH.

Using CUBO's Network Cubes, Mobile Service Providers can maximize any fiber investment by adding more lambdas easily as traffic grows - irrespective of the MSP or technology.

CUBO provide CWDM solutions support from 1 to 10G per lambda and are protocol agnostic. Using CUBO solutions MSP's can remain confident of being able to support any mix of today's or tomorrow's technologies - CDMA, UMTS or LTE - or be able to support multiple service providers on the same fiber pair.

The CUBO muxes are completely passive, Telcordia approved for outside plant (-40 to +85C), small and easily fit into a splice box that goes in the ODF.

All units compatible with CPRI to support both WIMAX & LTE deployments - providing up to 9.8Gig per lambda.

Whether LTE, WiMax, CDMA, or UMTS CUBO have a cost effective solution that works.



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