

Title: FTTH technology in the Aftermath of Sandy

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Abstract:

This talk will discuss the benefits of fiber to the home (FTTH) as a reliable and energy efficient solution for broadband access. Fiber optic cables are more robust against floods than copper cables. The replacement of damaged copper cables and considerations to install utility cables underground in the aftermath of super storm Sandy provide an opportunity to roll out a future proof wireline infrastructure.

A passive optical network (PON) does not require active equipment in the outside plant, which avoids the need for powering remote nodes and reduces the risk of failures. PON is the most energy efficient broadband access technology thanks to the low signal attenuation of the fiber transmission medium and the sharing of a single interface in the central office by multiple subscribers.

We will discuss research directions pursued in the GreenTouch research consortium to drastically reduce the power consumption even further. This will extend the service availability for a given power back-up capacity at the central office and customer premises in case of a power outage. An improved energy efficiency of the customer premises equipment (CPE) enables new power back-up approaches, such as easy-to-replace consumer batteries or small solar cells.