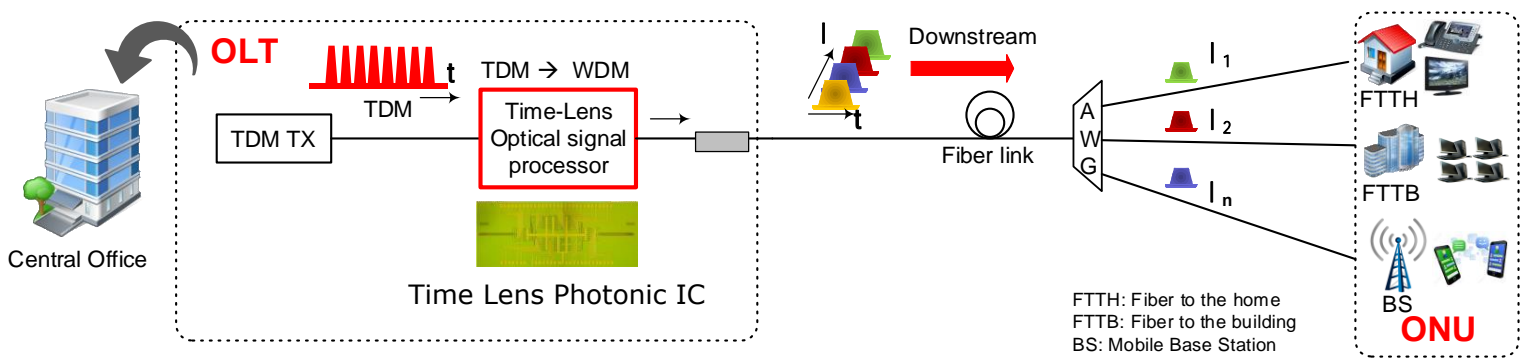


TimeLens

- Highly flexible WDM-PON with single TDM source



Value Proposition

The invention combines the strengths of TDM PON and WDM PON, which offers a strong value proposition:

- Energy-efficient WDM generation from single TDM TX, single laser
- Low loss WDM demultiplexing, energy-efficient reception
- Ultra low delay
- It is highly flexible in terms of wavelength allocation (flexible)

Commercial Perspectives

Optical networks are facilitating communication, functioning as ultra-high speed transmitting systems. In future 5G networks, the technology is expected to be deployed for the last wired mile between radio controllers (so called front-haul), where higher network bandwidth is required.

Technology Description

The TimeLens chip is a compact versatile tool for manipulating optical signals in both time and frequency for optimized network architectures. Optical networks superiority lies in the transmitter's ability to convert an output electrical signal into light pulses, dispatch it over optical fibre and convert it back again in the receiving end. TimeLens technology works as a hybrid to perform this conversion through a timelens to process the signal in a low risk, high speed manner.

Development Phase/Current State

The technology has been experimentally validated in test laboratory of the Technical University of Denmark. We are now in the process of testing a compact and stable portable demonstrator, pave the way towards the potential implementation of practical OFT units in communication networks.

Technology proven in lab:

1. 10-, 20-, 40-, 64-, 128- and 256 way WDM-splitting have been demonstrated with variable and reconfigurable channel utilisation, and user rates of 1 and 2 Gb/s. [1-2]
2. 32-Channel WDM Transmitter based on a Single Off-the-Shelf Transceiver and a Time Lens

Pending patent (priority date: 05-9-2017 – with no objections)

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Seeking

Commercialisation partners