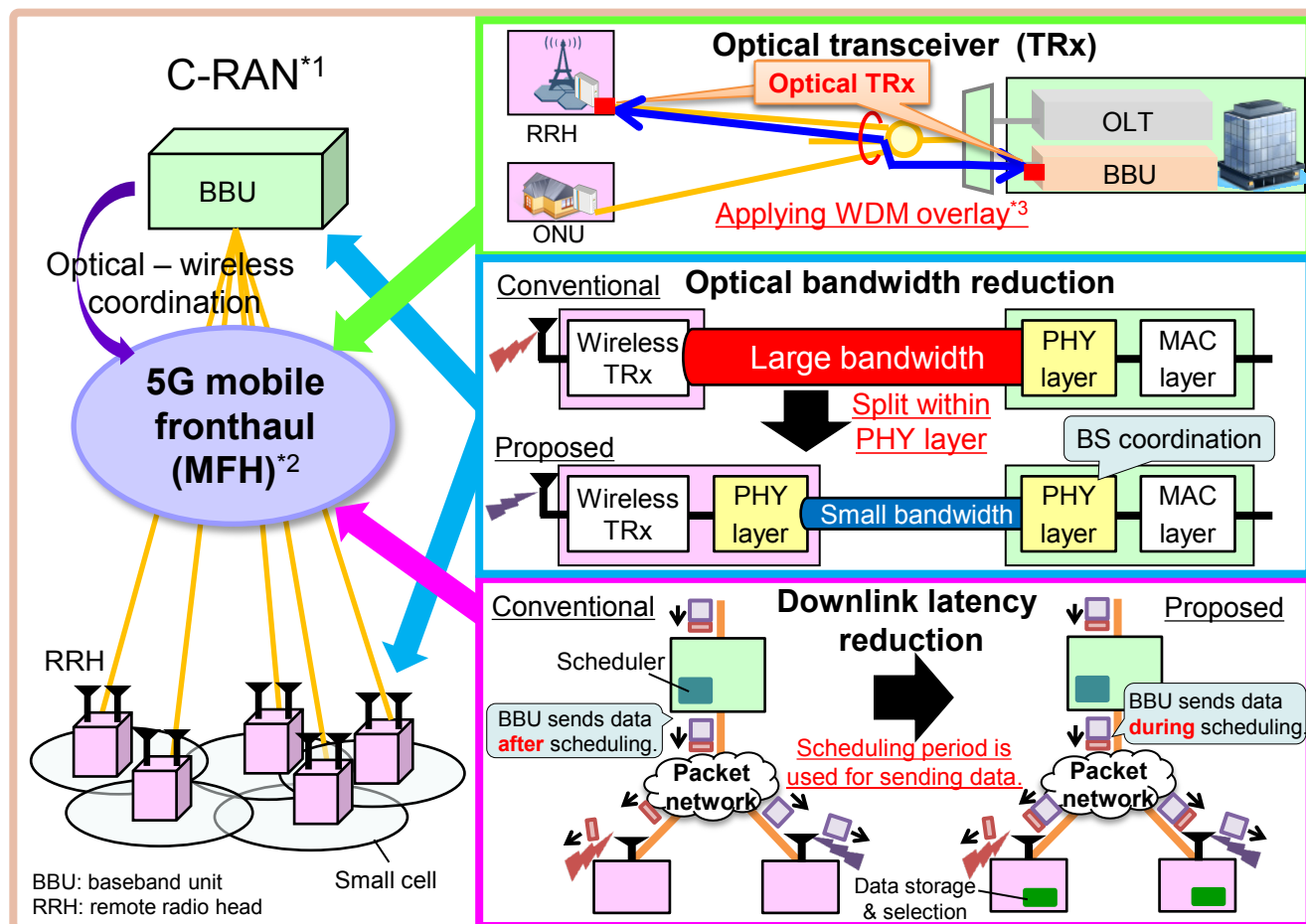


# Effective accommodation of base stations against explosive increase in mobile traffic

Many small-cell base stations will be densely deployed to accommodate the explosive increase in mobile traffic for mobile access beyond 2020. We introduce our technologies for effective accommodation of mobile traffic: optical transceiver for shared use of optical fibers, optical bandwidth reduction and downlink latency reduction.



## Features

- Effective accommodation of mobile traffic
- Cost-effective MFH by shared use of optical fiber among different services by WDM overlay. (optical transceiver)
- Reducing MFH optical bandwidth by changing functional split of BS and preserving wireless performance with our BS coordination scheme. (optical bandwidth reduction)
- Data are sent from BBU to all RRHs during scheduling. After the scheduling, each RRH selects the scheduled data it needs. This reduces downlink-transmission latency. (downlink latency reduction)
- Low-latency MFH transmission by coordination between mobile and optical access systems.

## Application Scenarios

- Effective accommodation of small cells with packet-based networks such as passive optical networks (PON).
- Standardizing MFH interface provides effective accommodation for various wireless access technologies.

<sup>\*1</sup> C-RAN (centralized radio access network): BS configuration that splits BS functions into BBU and RRH and connects them with optical fiber. C-RAN mitigates inter-cell interference with centralized processing of wireless signals.

<sup>\*2</sup> MFH (mobile fronthaul): Optical links between BBU and RRH in C-RAN. <sup>\*3</sup> WDM overlay: Technology for shared use of optical fiber by allocating another wavelength in an existing optical access system