AROONA

Providing broadband to a local municipal network with AROONA

The client's issue

Due to growing bandwidth requirements, the city of Montmagny needed to upgrade from 1 Gb/s to 10 Gb/s. With no available conduits, and due to the complexity involved in rewiring, the city wasn't in a position to change its current OM1 multimode cables to singlemode cables. In this case, AROONA-STAR was the most appropriate solution.

The AROONA solution

To avoid complex and costly fiber-optic cable rewiring works, the city of Montmagny opted for the passive AROONA-STAR solution from Cailabs, which made it possible to re-use the existing multimode infrastructure to provide broadband links, without doing renovation work.

The benefits of the solution

- **50%** savings compared to the cost of upgrading the infrastructure by rewiring
- **Half day needed** for the installation to obtain **3 pairs of multimode broadband cables**
- **10 Gb/s bandwidth** instead of the 1 Gb/s restriction

Growing bandwidth requirements

Located in the Montmorency valley, around 10 km from the northern edge of Paris, the city of Montmagny is pursuing a digital transition involving the modernization of its network infrastructures.

The city is using a computer network consisting of numerous workstations, spread out between the city hall, various administrative departments, the academy of music, the multimedia library, municipal police, etc. These sites were linked by **a multimode OM1 fiber-optic cable infrastructure.**

The city wanted to increase the bandwidth of its network in order to **anticipate developments related to the installation of new bandwidth-intensive applications** (video surveillance, requirements for various departments), while maintaining the homogeneity of its network system. The goal was to have a smooth transition, in order **to minimize the impact on the various municipal services.**

Lastly, **the cost of increasing the bandwidth was a significant issue** for the municipality.

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Rewiring was overly complex

Equipped with singlemode cables (dark fiber on a lease basis from a telecom operator), the city wanted to convert the multimode cables that it owns in order to ensure the continuity of service with the existing singlemode cables and avoid bottlenecks. The objective was to link the city hall office annexes, the cultural center (including the multimedia library, academy of music and dance, exhibition hall), the municipal police premises, and an intermediary site where the municipal technical services are located.

According to the city of Montmagny, there was no technically and financially viable solution to update from 1 Gb/s to 10 Gb/s with around 300m of OM1 fiber-optic cable.

Cailabs' partner FONEX presented AROONA-STAR to the city, it was the ideal solution in light of the situation. The installation was carried out by FONEX and Cailabs.
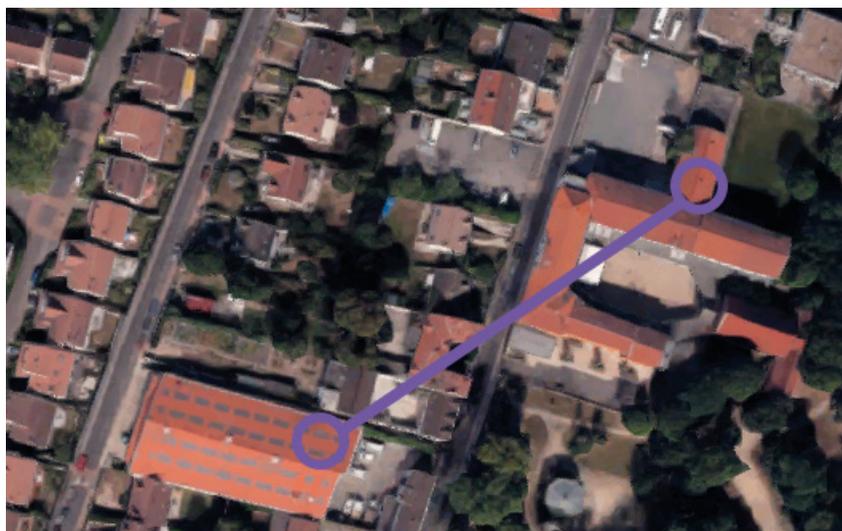
— Link MMF upgraded

A rapid and affordable upgrade project

Thanks to the passive AROONA solution, it was possible to upgrade the restrictive fiber optic connections in the space of half a day. The cost of the investment was **50% less than the cost of rewiring, which would certainly have been a complex undertaking**. Installed in just a few hours, the AROONA-STAR solution made it possible to upgrade **3 pairs of OM1 multimode cables to 10 Gb/s**. Interruption of service was handled in such a way as to minimize the disruption of activities.

Upgrade your network infrastructure through our partner

FONEX data systems is an innovative telecom equipment supplier focused on network infrastructure design solutions. They offer the best performance/price ratio, optimally adapted to their customers' needs. Thanks to a strategic partnership between Cailabs and FONEX data systems, FONEX was able to upgrade the customer's Local Area Network from 1 Gb/s to 10 Gb/s in less than 4 hours. Due to regulations, the customer had to upgrade their network and were able to utilize the extra bandwidth immediately after the installation of AROONA-STAR.

Cailabs: harness the full potential of optical fibers

Cailabs is a leading provider of innovative solutions designed to increase the capacity of optical fibers. We develop and manufacture a large range of light shaping components based on our patented, efficient and flexible Multi-Plane Light Conversion (MPLC) technology.

Worldwide telecommunication manufacturers and providers, such as Nokia, Cisco, Huawei, Tellabs and KDDI, trust our products to upgrade today's network infrastructure and create the networks of tomorrow.

At Cailabs, we help you make the most of your optical fibers!