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SERIES L: CONSTRUCTION, INSTALLATION AND
PROTECTION OF CABLES AND OTHER ELEMENTS OF
OUTSIDE PLANT

Optical cabling shared with multiple operators in buildings

Recommendation ITU-T L.82



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Summary

At this time, very high broadband network, especially FTTH (fibre to the home) deployment, is a major challenge for operators. One of the main issues is the terminal part of the network with the introduction of optical fibre cables into building up to the apartment with technical difficulties but also administrative ones. Recommendation ITU-T L.82 deals with the solutions which could be deployed to try to answer to building owners, operators and customers' needs.

This Recommendation refers to the single mode optical cabling in new and existing buildings. Clauses 5 and 6 explain the main constraints of a common optical infrastructure for several operators, offering FTTH services to customers in the same building. Then, the remainder of this Recommendation describes possible cabling solutions which could be deployed in buildings.

History

Edition	Recommendation	Approval	Study Group
1.0	ITU-T L.82	2010-07-29	15

FOREWORD

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Introduction

The proposed building cabling allows access to each operator to optical fibres in the building. The main goal of the concept is to be able to share the optical building cabling among different optical access providers.

The objectives are, on one hand, to reduce fibre installation and maintenance costs in the building (both at the customer premises and in the common parts) and, on the other hand, to reduce disturbance (noise, infrastructure works, dust, etc.) for inhabitants. The goal is also to avoid the possibility for an operator to somewhat "pre-empt" the optical link up to the customer in a building or to avoid cabling duplication if more than one FTTH operator is in a building.

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Optical cabling shared with multiple operators in buildings

1 Scope

This Recommendation is effective when optical cabling in a building is shared with multiple optical access operators. Figure 1 shows a schematic representation of what could exist in a building with multiple operators' FTTH access networks, without shared cabling.

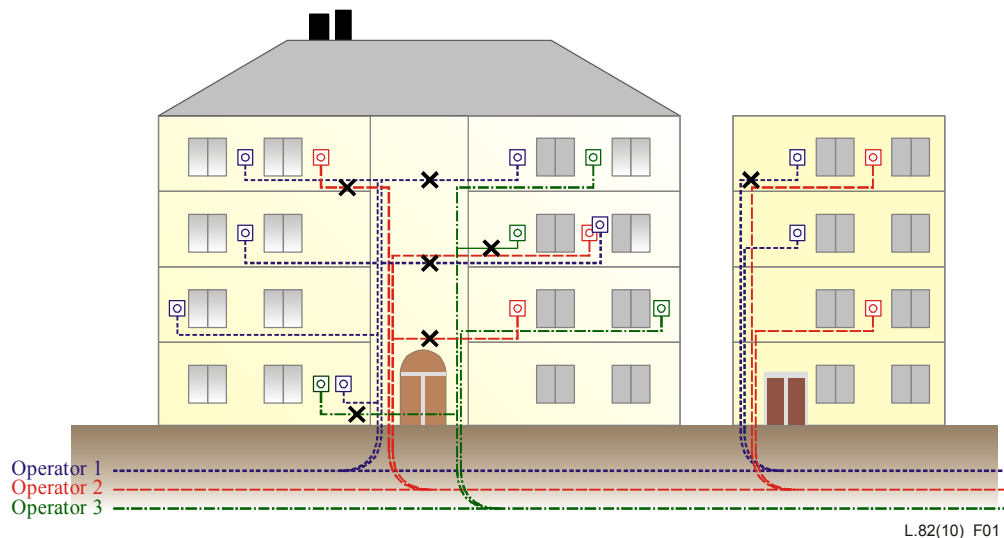


Figure 1 – Individual building cabling for each operator

Many cables and boxes could be installed in common parts in this assumption, which can cause permanent disturbance for inhabitants. Besides, saturation of infrastructures could be reached with a strong impact on reliability of existing and new cables and on maintenance issues.

A challenge for operators in that case could be to try to provide the condition for optical cabling sharing inside the building, as shown in Figure 2:

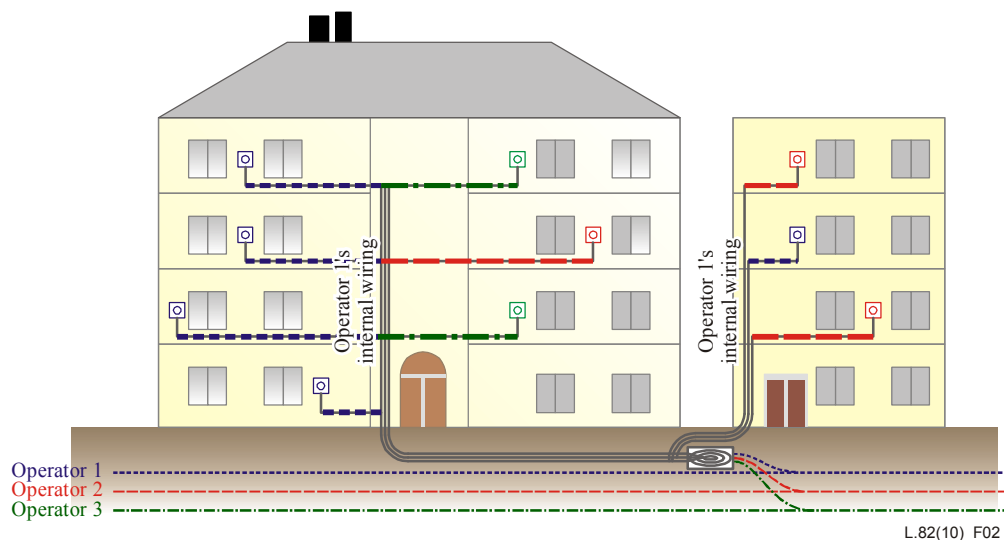


**Figure 2 – Shared optical building cabling for all operators
(when multiple "optical access networks" are deployed)**