



The task

Telecommunications companies currently face the challenge of offering their customers high bandwidths using different types of optical fibre connection technology (FTTx).

The economic viability of a network roll-out or restructuring project depends on the extent existing infrastructure can be used to avoid cost intensive civil works. However, conducting the necessary analyses using conventional procedures is extremely time-consuming. It often takes several weeks just to manually plan one roll-out project with a few thousand connections.

As such, it is virtually impossible to carry out a quick, yet reliable review of the current situation as a basis for a roll-out decision, and the roll-out planning process is very costly and time-consuming.

This means that it is near impossible to meet deadlines for providing a broad FTTx infrastructure with usual staffing levels without using intelligent planning support. Otherwise, valuable time to market will be lost.

The solution

netPlanning automatically calculates an efficiently structured, cost-effective network design within a very short space of time, making the results available for processing in the implementation planning process. This design is calculated based on demand data, existing infrastructure (transmission routes, empty conduits, sites), component catalogues with configurations of planning rules and material costs, and planning parameters and (sub-)structures specified by users.

Customer benefits

- Time to market permanently reduced for mass FTTx roll-out
- Efficient use of planning resources
- Transparent and objective basis for planning decisions, e.g. for roll-out sequence
- Cost-effective, demand-driven planning, making full use of existing infrastructure
- Reliable high quality high network quality
- Rapid adjustment of plans to account for changes in input values
- End-to-end solution, from strategic FTTx planning to preparation of implementation plan and construction work

Overview of netPlanning



Feeder areas



Distribution areas

Performance features

- netPlanning produces designs using existing network infrastructure. Once existing infrastructure has been pinpointed, planners can temporarily restrict or expand it for the automated network design process.
- It is generally possible to configure and individually adjust planning parameters such as selection of distribution sites, specification of usable components (cables, conduits, splitters etc.), blow-in length and cost functions.
- netPlanning visualises the calculated network structures (feeder cable and distribution areas) and creates comprehensive reports on the planning results (installation and civil engineering costs, parts and materials lists).
- Planned objects such as distribution sites, supplied points of demand and corresponding transmission routes are made available for processing as part of implementation planning.
- The automated planning process is highly scalable: netPlanning can handle large planning areas with up to many thousand supply points and efficiently supports the processing of several planning areas simultaneously.

Product manufacturer

Smallcases has been successfully providing GIS solutions to telecommunications companies, utilities and public institutions for many years. Providing business process support to FTTx roll-out projects is one of the key areas of the company's solution portfolio.

atesio (www.atesio.de) specialises in developing solutions for complex optimisation tasks using state-of-the-art mathematical methods. It has been successfully operating in the telecommunications market for 15 years now, picking up several innovation prizes along the way.

netPlanning perfectly combines the complementary areas of expertise of Smallcases and atesio within a single product.

Please do not hesitate to get in touch with us; we'd be happy to advise you.

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