

Skanova launches new FIBRE INSTALLATION METHOD

*The time, when **fibre installation** was expensive and complicated, is gone. Thanks to a completely new method and technology, broad band over fibre can be installed **faster, simpler** and **cheaper** than before. The first commercial **pilot project** in Skanova's **access network** has recently been completed.*

*- We see a **large potential** in using **the MTT-method** to extend the number of **areas with fibre access**, says Kaj Werner, vice president for infrastructure at Skanova.*

During October and November 2011 a commercial pilot project using micro trenching was carried out in Skanovas access network, in Nässjö. The heart of the MTT-method (Micro Trenching Technology) is the patent pending method and its supporting services owned by the company DellCron. Thanks to the unique design of the method, the project could be carried out smoothly and simply and with only minor disturbances of traffic and residents, although the installation was done along a main street with heavy traffic.

- This method opens up for making fibre installations in areas which otherwise would be excluded because of high costs for excavation and restoration, says Kaj Werner.

Skanova is constantly looking for new ways for reducing the cost for installation. DellCron's method is expected to have a very large potential in the areas suitable for MTT.

- A prerequisite is that the communes are positive and can accept the restoration method used in the MTT-method, says Kaj Werner. Some communes have been worried that the restoration of the street will not last. We at Skanova judge that the restoration is of high quality. We will extend our activity with other commercial pilots using the MTT-method in the communes, allowing it. In 2012 we plan to identify a number of areas specially suited for the MTT-method. We are satisfied with the



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results from Nässjö and we will continue to evaluate the method in other environments.

In the MTT-method a narrow groove (trench) is sawed in the pavement or the street and at the same time a number of specially designed ducts for fibre cables are laid down in the bottom of the trench. Depending on the size of the used ducts, up to 20 ducts can be placed in the trench at the same time.

- Now after several years of development,

we are looking forward with confidence to see how our micro trenching method will be received by network owners, road authorities, and house owners, says Hasse Hultman, technical director at DellCron. Specially in areas with detached or semi-detached houses a new industrialized method for FTTH (Fibre To The Home) installations is needed, and that is where our environmentally friendly technology is ideal. However the method works just as well in dense urban areas, as it gives large cost reductions compared with traditional excavation.



The sawing machine can cross streets without any major obstacles in the traffic. The traffic is released immediately after the sawing machine has crossed the street and the open trench may be crossed by traffic without any problems at all.

To saw a trench in the pavement or street and put down a number of ducts may seem trivial, however DellCron's MTT-method is much more than that. It is a completely industrialized process, from the detection of existing cables and ducts in the ground to automatic documentation of the installation using GPS.

- In large network projects there are some essential areas of expertise that may not be neglected, particularly when introducing an new highly industrialized deployment method, says Hasse Hultman. First the network must be planned in accordance with the chosen material and the chosen installation method. Secondly, production planning must be made in such a way that a rational installation process is achieved. The installation must be planned so that the the sawing machine is optimally utilized and other installation steps must be adapted for that.

- Very thin and/or old cracked asphalt may be a problem, because of the weight of the sawing machine, Hasse Hultman proceeds. For the few meters where asphalt is expected to be of low quality, the problem can be solved by laying out metal plates on the ground.

This is how the MTT-method works

The first step is to saw a trench through the surface layer of asphalt or concrete and into the underlying bearing layer. The trench is, in the current version of the method, about 20 mm wide and 38 cm deep (0.8" wide and 15" deep).

While the trench is being sawed (and before the trench's side walls are allowed

to collapse) a number of ducts for fibre cables are installed together with a so called search wire in the bottom of the trench. The search wire is used for future detection of the route for the ducts. The production capacity is at the moment 60-90 meters per hour, depending on the sawing conditions. The ambition is to improve the production capacity in future releases. In the close to dust free and environmentally friendly sawing process, most of the sawed up material is automatically collected in a big replaceable bag in the front of the carriage.

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Branches to passed properties are either made using a hand saw or a small road saw and are preferably made after the main trench is made.

The restoration process is made in two steps. First the trench is filled with a tested



and approved material, that is fluent at the time of filling and flows down and fills every cavity. The material cures after some time and becomes hard and stable against compression forces, however it does not become harder than that it is possible to dig into it with an ordinary shovel, if needed.

In order to achieve a water tight sealing, the top 4-5 cm of the trench is filled with a bitumen based sealing material.

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