

Sterlite helps CATV operator cut the cost of FTTH

Case Study ‐ Cable Media Brabant Gelderland (KBG)Oss in The Netherlands ‐ A Fiber-To-The Home DeploymentFTTH Europe Conference, Lisbon, Portugal ‐ 24 February, 2010 ‐ Oss is a cosmopolitan city in the North Brabant province of The Netherlands. It is a mix of residential and industrial areas between ‘s Hertogenbosch and Nijmegen and, like most cities in The Netherlands, residents receive their television service via cable. Until the end of 2008, this service was delivered over coaxial cable. In early 2009 a decision was made by the municipality to move this and other services over to FTTH.

The decision to switch to FTTH was madebecause it was deemed necessary to have faster connection speeds for bothupstream and downstream services and so that new services such as interactive TV, IP TV and video surveillance could be extended to the community. Thesewould not be available over copper cable due to its inherent bandwidthlimitations. Local cable service provider Cable MediaBrabant Gelderland (KBG) provides over 12,000 subscribers with CATV, TV andradio services, Internet and VOIP services. KBG made the decision to replace all its coaxial cables with optical fiber over a five-year period. In addition, all of the company’s new infrastructure in the area is designed to operate overfiber from the outset.Project aimsKBG needed to source its optical cableand passive components from a partner that would help them with the design ofthe network to ensure both technical and commercial success. KBG needed to buya large volume of micro-duct fiber and ensure that it could terminate a large number of connections at one point in serviceable “hand-holes” to avoid theneed for street cabinets.KBG itself also had the following aims:1. Ensure the delivery of CATV, TV and Radio, Internet and VOIP services to both existing and new customers into the future with higher speeds both upstream and downstream.2. Enable the potential of future advanced services, such as Interactive TV, home and business security services and high speed internet wireless services.3. Build an access infrastructure that would last for a minimum of 30 years.4. Find a supplier that was willing to invest time to help design the networkSolution KBG’s team headed by network managerHenk Seepers decided, after a tendering process, to work with the localBenelux-based team from Sterlite Technologies. “We needed a turn-key solution and wanted to work with a team that could act as an extension to our own teamto conceptualise and build the solution to meet our business objectives as well as a supplier that could meet and exceed our expectations on reliability,delivery, service and of course meet our technical specifications and price,” said Seepers.InstallationThe plan for FTTH in Oss will take five years for all of the coaxial cables to be replaced by optical fiber. Currently all CAI main distribution boards at KBG are already connected by fiber optic connections. Within the five year period, existing customers will be upgraded to fiber but all new customers will have fiber deployed to their homes straightaway.With all FTTH deployments the density ofconnections at termination points is a major issue and this would normallyrequire street cabinets above ground. As street cabinets are unsightly and vulnerable to being vandalised or damaged by car accidents, KBG specified that at the end of the project all connections should be underground. KBG alsowanted to avoid the cost of multiple civil works as individual premises wereadded. Sterlite’s solution was to develop aspecific enclosure for the purpose. The hand-holes are modular and have thespecific benefit of being accessible from street level during installation,which makes adding and removing connections as simple as possible.Hand-holesHenk Seepers explained the features andbenefits of Sterlite’s novel hand-hole approach to the fiber installation KBG ismaking: “Conventional solutions use either a cabinet or a buried hand-hole forconnecting fiber during installation, and storing the fiber closure when all customers are connected. By understanding our needs and installation practices,Sterlite offered us a solution that has the advantages of a street cabinet,street level hand-hole and buried hand-hole at different stages of the networkbuild.”“In the roll-out phase, our installerscan use the hand-hole as a cabinet or as a street-level box allowing customersto be easily connected to the feeder cable. Not all homes at a defined distribution point can be spliced and connected on the same day, and so existing buried hand-holes have to be buried and dug-up using civil works each day, which for KBG would be expensive and time-consuming. With the modular hand-hole at street level it is simple to open and close it until all 48 homes arespliced and connected to the feeder cable.”“After completion of all our customerconnections the street-level or cabinet hand-hole has the modular top unitremoved to convert to a fully protected underground box: no unsightly or vulnerable cabinet is left above ground. The modular design means installationtime and cost is minimised during roll-out, and upon completion the fiber closure is completely buried for minimal disruption and maximum security.”The first phase of the FTTH deploymentin Oss was been completed in the autumn of 2009 and it created no problems foreither existing buried fiber or in places where new cable had needed to be air-blowninto existing ducts. The cable recommended by Sterlite and chosen by KBG is a96-fiber micro-duct design with a small diameter of only 6.8mm (now furtherreduced to 6.5mm).This cable maximises duct utilisationand enabled simple installation. However it was the ability to re-use thehand-holes which meant KBG could significantly reduce its installation costsand were able to have a modular and flexible approach during each stage of thedeployment. By reducing installation time and thenumber of hand-holes needed on the project, KBG were able to save significantcosts. Having unfettered access to the hand-holes above ground during installation made it easier to add additional customers. PartnershipThe cooperative working relationshipbetween KBG and Sterlite was key to the project as many of the challenges wereovercome by careful forward planning in advance of deployment. One of KBG’s keymanagement issues was, and continues to be, keeping down the costs of theinstallation. That they have been able to do so, has meant that to date KBG hasfinanced the project out of its own pocket.Future-proofed fiber KBG’s thinking on this type of network is that fiber is the future. “To start a new network based on coax would be awaste,” said Seepers. All new connections on KBGs network will be fiber.For the business community, KBG offers fiber connections to the business customers in their service area; it also allowsthem to select and shop for the services that best suit their individualrequirements. These services are offered over an open network using the NDIXnetwork. “In part, our strategy in building out an FTTH network is to increasethe value of a major asset on

which other larger service providers can sell their services gaining us additional revenues from the network," said Seepers. The benefits of a close working relationship between KBG and Sterlite became evident through the project. Sterlite's assistance in minimising the cost of installation, cooperating on the design of the network and working to a common set of goals has meant no delays in deployment, no loss of performance and simple on-site integration. "Working with Sterlite Technologies for the delivery of the passive optical network infrastructure, has ensured that we can provide the residents of Oss, Berghem and Heumen with a reliable solution for now and into the future," said Seepers. Sterlite's Ashwin Laddhaa, Head of Telecoms Business, Europe, commented, "Solving problems for our customers by working in partnership with them means that Sterlite can help them deliver the best possible solution. We are able to not only deliver fiber for FTTH projects but also advise on the strategy for such deployments." "Having a comprehensive one-stop shop approach in this and similar projects enables network operators to significantly reduce the cost of both network build and operation. It also means a fast deployment timeframe and therefore quicker returns. The market requirement for increased bandwidth across the globe will lead to more and more FTTH projects." About Sterlite Technologies Sterlite Technologies Limited [BSE:532374, NSE:STRTECH] is a leading global provider of transmission solutions for the telecom and power industries. It is India's only fully integrated optical fiber manufacturer and the fifth largest, globally. The company is also the third largest global manufacturer of power conductors. Sterlite Technologies Limited is listed on the National Stock Exchange and the Bombay Stock Exchange. For more information, please visit www.sterlitetechnologies.com. About Cable Media Brabant Gelderland (KBG) Cable Media Brabant is a regional cable TV provider based in Berghem in The Netherlands. It is one of the first cable operators to broadcast high quality digital programs. For more information, please visit www.kabeltv-kbg.nl.