Last-mile connectivity remains a scarce commodity

Although there has been a dramatic surge in the amount of international bandwidth that is available in South Africa these days - courtesy of the SAT-2, SAT-3/SAFE, SEACOM and EASSy submarine fibre optic cables - backhaul and last-mile connectivity is still a scarce commodity.

Last-mile technology refers to the existing infrastructure from the local broad telecommunication backbone or backhaul networks of the telephone exchange, used to carry signals into the homes or offices of the end-users. This neighbourhood-level infrastructure usually spans a relatively short distance, hence the term last-mile'.

Most of the existing infrastructure is owned by the major fixed line operator, Telkom. Due in part to lack of regular and sufficient maintenance, much of it has fallen into a state of disrepair. Regular cable theft has also made upkeep difficult. Cost is another factor that significantly adds to the problem. Be it fixed line or wireless, deploying last-mile infrastructure - especially in rural areas - is expensive. However, in many urban areas the situation is not much better with many users forced to share the same last-mile infrastructure, causing a bottle-neck effect.

Still out of reach

"Right now, the last-mile issue can be likened to having a carrot - which, in this case, is all that data we now have pouring into the country - and dangling it just out of reach of many end users," says Mitchell Barker, CEO of WhichVoIP.co.za, an online platform that allows users to find and compare the services and prices of various voice over Internet protocol (VoIP) providers in South Africa.

"The arrival of all these new cables may have significantly dropped the cost of international transmission, but the lack of sufficient last-mile connectivity is still keeping the prices of national transmission too high. And since the quality and reliability of the telecommunications and computing solutions that rely on the last-mile to be delivered to the end user cannot be guaranteed, we believe that it is still hampering the growth of VoIP in South Africa."

However, steps are being taken to rectify the situation. The national communications regulator, the Independent

Communications Authority of South Africa (ICASA), has been locked in a protracted legislative procedure with Telkom to get the operator's local loop of copper cables unbundled into homes and businesses. The first step of that local-loop unbundling (LLU) was set to happen in November, but in early October, reports suggested that this deadline might not be met, since the regulatory body and the operator were still hashing out the finer details.

Collaboration is needed

According to Mark van Vuuren, MD of Jasco ICT Solutions, the public sector should collaborate with the private sector in order to share the costs of last-mile infrastructure deployment. "We couldn't agree more," says Barker.
"Many industry players are in favour of collaboration. Andile Ngcaba, the founder and chairman of Convergence Partners, also recently made the great suggestion that the national backbone should be mapped. He said that you often see one organisation digging on one side of the street while another is digging on the other side, which is an utter waste of resources. Instead, companies should just open their networks to each other."

He adds that some are of the opinion that it is a great business opportunity for VoIP providers and ISPs to also supply last-mile infrastructure to their clients, but there are several deterring factors. The high cost is one, but another, legitimate fear is that after spending so much money on rolling out last-mile technology to serve a particular client, that the client will simply end up switching to a different provider.

"For many VoIP and ISPs, going that last mile is just too big and too costly a risk to take on their own. Collaboration would therefore be in everybody's best interest."