

Unique Poynting subterranean base station in line for AfricaCom accolade

Poynting, South Africa's largest wireless antenna designer and producer, has been shortlisted for "**Best Connectivity Solution for Africa**" in the AfricaCom 2013 awards. Poynting joins leading international companies such as Orange, Ericsson and Seacom on the overall list of nominees for various awards.

With more than 650 million mobile phone users today and a predicted 1 billion users by 2017, Africa needs a connectivity initiative that is flexible, adaptable and geared for future growth. Poynting has succeeded in developing an innovative subterranean base station solution for Africa, the Sub-T, at a tenth of the size and cost of traditional base stations. "With 80% of the Sub-T buried underground next to a streetlight-pole like mast, the solution gives African operators a viable alternative to expand connectivity and deploy more base stations, at a lower cost, with less power requirements, a smaller footprint of roughly 4m² and inherent security; improving communication and connectivity for Africa," says Poynting CEO, Andre Fourie.

It is predicted that between 2013 and 2017, the consumer mobile traffic needs will grow roughly 80% per year. The "big data" revolution worldwide also calls for a solution that is easily deployable. According to Fourie, around 10 times more base stations are required even to service current users in Africa. "While one base station may serve several 1000 active voice users, it may be insufficient for 100 active data users as data usage has no limits. Cost versus return constraints of traditional base stations, makes expansion in this way commercially impossible and increasing the amount of traditional cellular base stations is not necessarily a viable option. They take up too much space, usually 40 m², are quite expensive and they are not secure against cable and battery theft. Another challenge is to find sites for such proliferation in most urban areas."

"Our objective was to create a flexible solution that takes current and future, equipment and data usage growth needs into consideration," says Fourie. "An important factor is that it is possible to install the subterranean base station basically anywhere including street corners, private properties and parks."

Fourie says careful consideration was given to the total cost of ownership. "In

addition to facilitating easy deployment, a smaller solution that allows streetlight poles or flag poles to be used as base stations reduces costs. Additionally we realised that the product needs to be secure against theft, energy efficient, employ natural geo-thermal cooling, present a small footprint, and be adaptable to different equipment and requirements found in Africa.”

Security is a major issue in Africa and further adds to the cost burden. “The Sub-T has all cables ducted from the subterranean enclosure into the pole that houses the antenna with no visible cables or batteries, making it vandal-proof and ensuring uninterrupted connectivity. Lid construction has unique features making locks inaccessible to bolt cutters and the batteries are stored at the bottom of the buried steel-and-concrete clad enclosure, making access to these extremely difficult.”

Poynting currently has Sub-Ts operating in Harare, Polokwane, Oudtshoorn, Bisho, Umtata and Butterworth, creating connectivity in unconnected areas and proving very successful in demanding African conditions. Poynting has had strong interest and enquiries from African countries, particularly from Botswana and Nigeria at this stage.

“Flexibility is a necessity for all network service providers as all have different equipment requirements, back-up power and other specific needs,” says Fourie. Poynting is catering for the needs of two operators in South Africa and one in Zimbabwe. Concept proposals, including diesel generator options, are underway for other African operators.

“The Poynting Sub-T is an African design, specifically for African conditions and is supported by an African company with considerable technological skills and abilities. We believe it can have a great impact in assisting African operators to meet data capacity demands over the next decade,” says Fourie.