

CASE STUDY

University of KwaZulu-Natal

BACKGROUND

The University of KwaZulu-Natal (UKZN) is one of Comsol's first clients boasting a relationship dating back to 1998. This relationship began with Comsol supplying Fast Ethernet FSO solutions for several mission critical inter-campus requirements. Once the benefits of wireless technology became apparent, the UKZN IT department began to increasingly incorporate Comsol's solutions into their network.

CHIEF BENEFITS OF THE PROJECT

- UKZN was able to “build a network” that offered world class capacity at a fraction of the cost of leased lines
- The wireless network offered better “uptime” and increased stability compared to leased line solutions
- Quick deployment meant that new sites could be incorporated into the network in days as opposed to months

SUMMARY OF PRODUCTS

- Motorola PtP 300/400/500/600
- MRV FSO
- Proxim MP.11, QB.11

CRITICAL DATES

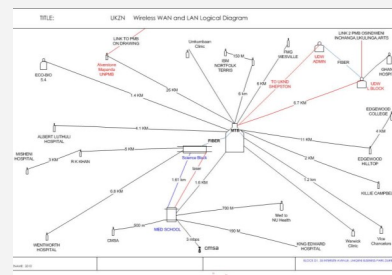
- 1998: Commencement of relationship
- 2002: Mass deployment of inter-campus links completed
- 2004: Long distance campus-to-campus network built including Pietermaritzburg to Durban
- 2006: Merge with DUT resulted in additional infrastructure to cater for the new sites



Proxim broadband wireless services last mile access, Point-to-Point or Point-to-MultiPoint solutions. These connect faculties in the 3 to 10 km radius of the main campuses.



Gigabit wireless Bridge Point-to-Point high capacity network connectivity between, medical school and science block.



UKZN wireless LAN and WAN network

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CHALLENGES

- High capacity was required with extremely high uptimes so as to ensure that the University's operations were not disrupted
- Long, challenging links were required to cater for the Pietermaritzburg-Durban route as well as some of the outlying rural UKZN facilities
- High emphasis on cost effectiveness as the University has strict budgets to adhere to

THE SOLUTION

Comsol built several large intercampus Point-to-Point and Point-to-MultiPoint networks for UKZN at all main campus sites. These links ranged from 20Mbps full duplex up to 100Mbps full duplex, resulting in a world class, high speed wireless network with extremely high up times. These networks carry both voice and data, with video connectivity available as well. Once the inter-campus networks were deployed, large backbone links were built in order to connect all the remote campuses into one WAN network, resulting in a pure wireless solution to all UKZN's connectivity requirements. This wireless network not only provided higher capacity as opposed to any other leased line alternative, but also saved the university millions of Rands.

FUTURE GROWTH

UKZN continues to upgrade the wireless network year to year in order to keep the network at the thin edge of the wedge, however the bulk of the network will remain in place for several years to come. Further wireless initiatives are being investigated by the University, for example the FMC (Fixed Mobile Convergence) initiative.

CONTACTS

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Comsol ~ Motorola: Wireless Ethernet Bridges used to link main facilities Durban to Pietermaritzburg and MTB Durban to Westville admin



Comsol ~ Motorola: UKZN science and medical main backbones



Comsol ~ Motorola: Built a solution from Durban UKZN to PMB UNPMB with full redundant uptime