

MSc student: Nkanyiso Ndlovu

Collaboration partner: no formal partner, but maybe tied to a partnership with the South African Medical Research Council (MRC)

Project overview:

The project aims to investigate the various challenges associated with the use and integration of portable medical devices in a Health Enterprise Architecture. A prototype application to acquire, upload and analyse foetal heart rate scans will be designed and implemented. The application will allow for better detection of high risk pregnant women in rural areas who require further clinical intervention. Challenges include: communication transport, e.g. 3G, designing and developing effective communication protocols for medical devices to access a central patient vault, signal processing, noise removal, data representation, data integration and data analysis. Given the pervasive nature of mobile phone/3G networks in Africa, the deployment of effective portable medical devices has the potential to make significant inroads in rural healthcare.