

Executive Summary

This report presents the results of an investigation of the technical and commercial viability of using GSM technology for providing wireless data services on a large-scale basis in Sub-Saharan Africa. The study objective was to investigate the business cases for data services considering the very special situation facing mobile operators in Africa. Essentially, the objective was to investigate whether GSM would be a financially viable solution for offering Internet services to vast areas in Africa, particularly since no other alternatives are available in the short term.

Privately financed GSM operators in Sub-Saharan Africa have in a few years created a completely new telecom infrastructure with a capacity far greater than what the state-owned telecom authorities have provided in 100 years. More than 100 operators are active in the continent, most with great financial success. Expectations of future growth in subscribers and revenues continue to mobilise investment capital for expansion.

At the same time, Internet access is lagging behind, and most African nations are far behind in their use of ICT. Access is limited to the inadequate fixed networks or expensive VSAT connections, restricting Internet access to the traditional economic centres. The new GSM networks have wider area coverage, and the built-in GPRS/EDGE standard can provide wireless data services wherever the GSM networks reach. Data services can become an important future revenue

source for a GSM operator.

So far, only a few operators in Africa have implemented GPRS and started to sell data services. For the remaining ones, there is a question about the business case for GPRS and EDGE. All operators know that the number of GPRS customers will only be a fraction of the voice subscribers, and that the revenue base for data services is rather small. Introducing GPRS services require additional investments that may compete for management's attention with further investments in coverage, in order to meet sometimes-aggressive competitors.

We have shown in this report that GPRS services are profitable even for small operators. There are therefore very strong reasons for starting to address this market in order to ensure that revenue growth continues even after the growth in the voice market has begun to taper off. In addition, there is a strong upside in profitability for those operators that can secure a good market share by addressing the difficult distribution issues.

The report highlights the importance of low-cost, dedicated data terminals for the emerging markets. Certain initiatives are under way and their success is a prerequisite for Internet services to become a mass market in Africa. Without such terminals, the Internet penetration would remain below one percent, slightly above the fixed line penetration.

The process towards GPRS has started and this report can help

the operators in working out their own business cases based on their own special conditions. This report can also help African Governments to realize that there is a new opportunity to get Internet services to a very large percentage of their population. Many national ICT plans exist, but very few of them have taken the GPRS opportunity into account. How many Government officials in Africa realize that it is technically and financially feasible to equip all secondary schools with Internet access via GPRS? No other technical alternatives exist that would be as cost efficient.