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ACCELON (PTY) LIMITED

ICT for Education and Development

Technical Panel: Theme 2 – The Importance of Technical Infrastructure & an Enabling Environment: Case Study of Nigeria.

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1. Introduction

Infrastructure is central in achieving the goal of digital inclusion, enabling universal, sustainable, ubiquitous and affordable access to ICTs by all, taking into account relevant solutions already in place in developing countries and countries with economies in transition, to provide sustainable connectivity and access to remote and marginalized areas at national and regional levels.

2. History of Accelon in e-Education

Toward the end of the last quarter of 2004, Accelon successfully executed the West Africa Examination Council (WAEC) online initiative in partnership with Sidmach Technologies as a software solution provider. This achievement made WAEC the first examination body in Nigeria to accept registration for examinations online and by the same stroke Accelon came to the forefront of its segment in the ICT industry as premier provider of broadband connectivity for the educational sector on a very broad scope.

With WAEC going online, it became imperative for schools in Nigeria that participate in all WAEC conducted examinations to move from paper based registration to online registration. In addition to WAEC taking registration for their examinations online, we also realized that a sizeable number of highbrow private schools in Nigeria now enroll their students for International General Certificate of Senior Education (IGSCE) where they are required to take Information Communication Technology (ICT) as a subject. The fact that the IGSCE examination is conducted online has made Internet connectivity a compulsory tool for these schools.

Upon discovery of this market need, we decided to start a school connectivity project titled the **Accelon e-Education Project** (AEEP) that offers schools on our network Internet connectivity and value added services. (*VSAT connectivity is most appropriate in Nigeria due to the poor, or non-existent state of other telecommunication infrastructure in most areas.*) The project has been active since January 2005 and we are highly encouraged by the tremendous response given the conservative attitude of teachers, school owners and educationists in general

We currently have over 125 schools on our network . It is worthy to note that we have schools from all the geo-political zones in Nigeria on board. This gives a good national spread and will get better as we get more schools on our network.

3. Value Added Services Offered by Accelon's e-Education Program.

For any school that joins the Accelon network, they will get the following value added services;

- Free website
- Free domain name
- Free Hosting
- 10% discount on equipment and installation cost
- Five free e-mail addresses
- Access to **Accelon Grid for Education (AGE)**: This grid will include a portal that will allow schools to have unlimited access to local and global educational resources. Technical specifications and planning exist for this facility which has not yet been implemented due to shortage of funds.

4. Critical Success Factors for the Growth of e-Education in Nigeria.

It is evident that e-Education is still in an embryonic stage in Nigeria. Areas to be addressed to further enhance the utilization of ICT by the education sector include serious attention to the following issues:

4.1 Funding

Educational institutions need access to funding to acquire infrastructure needed to access the internet. If direct funding is not readily available from Government, NGO's or private sponsorships, financing should be arranged through financial institutions.

NGO funding from the Petroleum Trust Development Fund (PTDF) for providing connectivity to several Nigerian Universities and Federal Colleges of Education is laudable.

Accelon has been working closely with Oceanic Bank who is making financing packages available to schools. We believe that approval is also in place to finance approximately 1,000 new schools in the next year.

Government sponsored incentives could be made available to encourage this type of private sector assistance.

The major operating cost component to provide e-Education services to educational institutions by VSAT is bandwidth cost. Subsidized satellite bandwidth will assist these institutions. Accelon and SES Astra, as members of the Oracle Consortium are participating in the NEPAD program in West and Central Africa to provide internet satellite access to schools on a subsidized basis. A pilot program to provide free internet access to twelve schools in four different countries (Ghana, Mali, Gabon and Kenya) is currently underway. In Nigeria alone, this effort needs to be accelerated a few thousand times.

4.2 Internet Access to Content

A host of international internet web sites providing educational content on interactive basis exists. The economical access to locally developed content however should be the priority and needs to be addressed urgently. This can be achieved by the development of education portals accessible by teachers, administrators, students and parents. Accelon currently provides hosting facilities for schools to host own web sites. This will in future be extended to allow access to the AGE.

There are clearly different levels of access required. Teachers, often requiring training and re-training themselves, require access to much broader and more specialized material. Students need access to teaching material focused on the curriculum. Finally administrators need access to teaching administration type of information.

A national program, possibly a Private Public Partnership to coordinate development of education portals to serve as databases for local education material, school management information and administrative data needs urgent attention. Accelon's e-Education program can serve as a pilot for such a program with a draft plan for the portal already being developed.

A Private Public Sector partnership will require clear definition of roles to avoid costly mistakes of a protected and over-regulated infrastructure. There will also be a need for the NCC to incentivise Private equity participation.

4.3 Infrastructure – hardware, networks, power

Infrastructure build-out must make commercial sense. Attempts must be made to harness sunk cost wherever possible, and the resulting infrastructure must be homogeneous enough to minimize interface issues and to enhance VAS distribution.

Infrastructure to achieve internet connectivity by VSAT is normally provided by the service provider (Accelon in our case). Additional hardware and software is required by the educational institutions including

LAN hardware, computers, servers, etc. This hardware and software must be made available at an affordable cost to allow the masses to adopt automation as a way of life, resulting in a massive engagement of ICT in the education sector.

In the Nigeria context infrastructure also include providing, or at least upgrading the electrical power facilities for an educational institution at an affordable cost to ensure reliable power supply. Industry incentives could also be made available by Government to provide such infrastructure and facilities at subsidized rates

5. Conclusion.

Investment in education is of paramount importance to ensure sustainable growth in Nigeria against the background of an ever increasing shortfall of adequately trained teaching resources. ICT, and more specifically low cost internet connectivity provides an extremely effective means to achieve this objective. This, in conjunction with the provision of cost effective access to content across the education value chain, will be the critical challenge to be dealt with by the primary stakeholders in this sector.

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