

**Opening Statement by The Executive Vice Chairman,  
Nigerian Communications Commission, at the Workshop on WiFi and  
Bluetooth Technology Applications for Nigeria  
Held at Nicon Hilton, Abuja on 28<sup>th</sup> August, 2003**

---

Protocols.

I like to welcome you all to this workshop on Wifi and Bluetooth Technology Applications for Nigeria put together by NCC. As part of NCC's stakeholder consultation process, this aims to solicit views from interested parties and stakeholders on the desirability and means to ensure timely and orderly deployment of these emerging technologies in the Nigerian market.

Wifi and Bluetooth technologies as we know them today represent some of the most recent attempts to satisfy mankind's age long desire for seamless communications. They are emerging technologies that both have their roots in the continuing growth and development of wireless communications systems. Since their emergence less than a decade ago, these technologies have grown in significance and popularity and have had considerable impact on the worldwide ICT market place especially in the advanced countries in North America, Europe and Asia. Their proliferation in consumer electronics, from PDAs to digital cameras, cell phones, music players, games PCs, has given rise to the Personal Area Network (PAN), and with it, unimaginable possibilities. Thus

from very modest beginnings, we have seen these technologies grow to a sort of mass market product.

Bluetooth is not a technology as such, but rather, an “enabling technology”. As an open specification that enables short-range wireless voice and data communications, it allows devices such as mobile phones, headsets, PDAs, laptops and printers, etc to communicate and send data to each other without the need for wires or cables linking them. It was specifically designed as a low cost, low power, radio technology suited to short range PAN applications, typically not more than 10m apart within which any Bluetooth-enabled device can communicate with a similarly enabled device.

Wi-Fi (short for Wireless Fidelity) is used generically in reference to any type of 802.11 network or enabled device or equipment also referred to as 802.11x, in view of enhancements that have seen the specifications progress from 802.11a to b and to g currently, with possibility for future enhancements that would bring about increased speeds, etc. Essentially borne out of an attempt to go from wired to wireless Local Area Networks (LANs), it has emerged as a major service offering through the activities of the Wi-Fi Alliance. And so what initially began as an attempt to ensure wireless ethernet compatibility among incompatible products from various manufacturers, became a global initiative for certifying all 802.11 based products for interoperability. Conceived to operate in the 2.4 and 5.8 GHz ISM bands in order to save regulators and

spectrum managers the world over the trouble of looking for scarce spectrum for wireless LAN (WLAN) implementations, typically for indoor use, the initiative culminated in what we now see, with the crossing of regulatory hurdles, as the emergence of outdoor applications of the technology with Wi-Fi Service Providers springing up rapidly and deploying global Wi-Fi Hotspots at diverse locations such as airports, hotels, conferences, etc in major cities around the world that provide high speed connectivity for corporate bodies and mobile personnel, etc.

While Bluetooth is designed for low speed data communications comparable with those of 2G systems in existence today, Wi-Fi on the other hand is designed for high speed connectivity comparable to those of the proposed 3G systems. Conceived to operate in inexpensive ISM spectrum, made from relatively inexpensive technology and equipment that is cheap to implement and support as well as easy to use, any device that has a Wi-Fi component (a card and antenna) or that is bluetooth-enabled can communicate. These have all contributed to the proliferation of these technologies in consumer electronics from PDAs to digital cameras, cell phones, music players, games, PCs, printers, etc and led to their exponential growth and popularity.

While these emerging technologies are yet to make their impact in the developing countries and indeed Nigeria, there is however a great potential and

growing interest in them, given expected market trends in the entrenchment of these technologies which forecast that by the end of this year, all laptops and mobile devices will come standard equipped with Wi-Fi cards.

Being the fastest growing ICT market in Africa with the adoption of all virtually all of standards of wireless communications technologies, GSM, CDMA and other cordless systems, etc, as well as the rapid growth of Internet with an estimated 600 Internet users per 10,000 inhabitants and atleast 60 Internet hosts, Wi-Fi and Bluetooth technologies no doubt have the potential to contribute significantly to the growing telecommunications revolution in Nigeria, by ensuring a “marriage of convenience” between wireless communications and Internet service. They can be successfully exploited to deliver cost effective high speed connectivity for different classes of users including residential, corporate bodies and mobile personnel. Because these technologies are cheap to acquire, implement and support, these make them the technologies best suited for deployment in a developing country such as Nigeria.

As with any new technology, the emergence, rapid growth and popularity of Bluetooth and Wi-Fi is bound to have great socio-economic impacts on the way we live and work. Already, either as indoor WLAN and outdoor Hotspot, has brought it side by side with 3G either as competition or as a complement depending on the perspective it is being looked at. Its continuing development

and evolution into other 802.11x specifications will continue to create both an opportunity as well as poses a threat and raises a whole lot of issues and challenges, in particular, technical, regulatory and business, etc, that will continue to generate discussion among ICT stakeholders.

Different business models, technical guidelines and regulatory frameworks have been adopted in different countries for the delivery of Wi-Fi services in response to relevant market drivers. Different market forecasts are also obtainable in those regimes. The essence of this Workshop is to provide ample opportunity for ICT experts, that the NCC has been able to gather from within and outside the country, to dwell on the emerging issues of these technologies and their implications for a developing country like ours. In going through the maze of information that usually characterizes emerging issues, it is NCC's expectation that invaluable information will be distilled that will assist in the articulation of appropriate policy and regulatory frameworks that will anticipate these technologies as they land in the country. This will assure orderly deployment of these technologies with attendant socio-economic development of the country by promoting business and technical and potentials of same alongside the local ICT.

We thank you for honouring our invitation and taking time off your busy schedules to participate at this Workshop either by way of papers you have

prepared and will be presenting or the wealth of knowledge you will be leaving with us through your expert contributions on the subject.

Thank you for your contribution.