EFFECTIVE USE OF ICT TOOLS TO COMBAT INSECURITY MENACE IN NIGERIA

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Abstract—Information and communication technology became the all round program that is applicable in all our day to day activities across the world. Basically ICT is a phenomenal service that can lead to the enhancement of high multimedia services such as video, text, images and audio files. This paper will give rise to how ICT tools can be used to combat insecurity in Nigeria where a lot of application will be used in order to achieve the aims of this research. Insecurity is one of the biggest problem that a lot of countries are suffering from such as Nigeria, Syria, Iraq, Yemen, Afghanistan and so many others, where the government has no control over some areas that allows insurgence to carry out some terroristic activities as such this paper will talk about a lot of measures to be taking with the used of information and communication technology.

Keyword—insecurity, ICT, applications, tools, multimedia

I. INTRODUCTION

The ICT stands for Information and Communication Technology and is defined as a “Diverse set of Technological tools and resources used to communicate, and to create, disseminate, store and manage information” (Blurton C., 1999). Information communication technology is the new communication and computing technology used for creating, storing, selecting, changing, developing, receiving and displaying many kind of information. ICT is classified into three groups namely: (i) those that process information e.g. computer (ii) those that disseminate information e.g. communication i.e. electromagnetic devices and system (iii) those for presentation of information e.g. multimedia (Adewoyin, 2009).

ICT is a technological tools and resources used to communicate, create, organize, disseminate, store, retrieve and manage information. Effective use of ICT tools for combating insecurity in Nigeria is a research paper using the technology to execute some major issues of insecurity in the country, ICT is a very wide umbrella that includes any communication device which encompasses radio, phones, computer, satellite, networking, location and any other internet application such as video conferencing and so on (Chika, 2008).

Technology is one of the platforms that cannot be ignored, especially when it comes to insecurity where by a lot of instruments can be deployed to tackle, improve vigilance of all the organizational activities. Is a saying that security is every ones concern? Basically ICT can be a great tool in detection and identification of citizens, their interaction and communication, movement, education and so on. When we look at Nigeria in particular, Nigeria is a country that has a lot of issues that can contribute to the insecurity such as poverty, illiteracy, corruption, unemployment and so on. Any country with any of the above can be at risk of increase in the level of violence or crimes e.g. robbery, kidnapping, rape, and even terrorism.
II. ICT TOOLS FOR ENHANCING SECURITY

Some ICT tools can be used to enhanced security such as

2.1 Close Circuit Television (CCTV)

CCTV plays a significant role in protecting the public and assisting the police in the investigation of crime. The UK is one of the most watched countries in the world (McCahill, M. and Norris, C. 2003). It is estimated that there are five million CCTV cameras in use today, and this number is likely to rise in the future (Gill, 2006). Even though the exact number of CCTV systems deployed in the UK is unclear, “the extent of CCTV coverage and the government’s funding of new systems have increased dramatically over the last decade,” yet there is little substantive research evidence to show that CCTV works (Armitage, 2002).

Social perceptions and attitudes towards security have changed, and over time society has become increasingly security conscious. This change has also been a result of the mass media coverage on crime. People have changed their views as a result of terrorism, gun crime, child abductions, etc. And have adopted a more proactive role in ensuring their own safety. One way this has been achieved is through investment in CCTV systems. Security is now considered essential for the protection of both people (e.g., within businesses and for the general public) and their property. With the rise in crime in Nigeria especially in the North East and South-South where terrorism and kidnapping are issues disturbing the peace of the region. There is need for CCTV to be deployed.

2.2 Online Vehicle Registration

Vehicle Registration in Nigeria began over 100 years ago and the records have been essentially manual which in turn has not help to raise the efficiency of general automotive services in recent years. Today, computer has been discovered as a very efficient instrument, which has played a very significant role in adequate management of information. However, computerization has helped in many areas of life and due to vehicle owners, the thought of computerization of this operation becomes of great important in order to wipe out the manual data processing system from which many problem have originated.

One of the main objectives of this research paper is to come up with an online registration for vehicle a more reliable and better medium where road network can be controlled, this cannot be achieved without a scheme; some of the road network schemes are found in Singapore and Malaysia. Electronic road control is one of the main schemes established by Singapore government to control road traffic where only licensed and registered vehicles are allowed in the road (Authority, 2016). Vehicles movement is controlled due to the installation of gantries which determined and sensor the movement of each vehicle that pass by for the day. With the help of this system the government also introduces the electronic road pricing scheme. ERP is an Electronic Road Pricing System used in managing road. Based on a pay-as-you-use principle, motorists are charged when they use priced roads.

Some benefits of ERP system are:

- Minimizes traffic volume.
- Record of each vehicle passed for the day.
- Optimizes usage of the road network.
- No human error.
- ERP is reliable and fully automated system operates 24 hours.
- Its central computer system ensures gantries are always working properly.
2.3 Sim Registration

A SIM, Subscriber Identity Module, is the removable circuit board found in a modern cellular phone. It carries the network identity information and is a type of smart card which can also be found on payment cards (EMV), ID cards and so on. A smart card is basically a small computer, providing a safe and controlled execution environment (Edsbäcker, 2010-06-12). When the GSM standard was proposed there was an obvious need for a strong user/network authorization. This meant a telephone number was to be closely tied to a subscriber account in the operator’s network and at the same time making it very hard for someone to copy the information (since this might enable debiting calls on somebody else’s account). One way to solve this would mean putting the phone number, necessary encryption keys and the like inside the physical phone itself. This was the method used in older American CDMA one-based networks. However, it meant that the user got one phone number for each physical phone, making replacement a big problem. In order to avoid this in the GSM networks, the authentication and user identity functionality was placed on a removable smart card. This smart card type was called a Subscriber Identity Module (SIM). The smart card command set as defined by the ISO standard was extended to make it possible for the SIM to perform user interaction. Examples of such commands are the ability to display text on the phone’s display, get user input and sending/receiving SMS.

The Nigerian Communications Commission (NCC) embarked on a nationwide SIM Card Registration Project which commenced on March 28th 2011. This was necessitated by the fact that in 2008, security agencies approached the Commission to assist them in resolving crimes perpetrated through the use of telephones in which criminal elements could not be identified with the number of the phones that they use.

The objectives of SIM Registration exercise were:

- To assist security agencies in resolving crime and by extension to enhance the security of the state.
- To facilitate the collation of data by the Commission about phone usage in Nigeria
- To enable operators to have a predictable profile about the users on their networks
- To enable the Commission to effectively implement other value added services like Number Portability among others.

The Nigerian President Muhammadu Buhari spoke in a joint press conference with the visiting South African president, Mr. Jacob Zuma at the presidential villa Abuja. He gave the reason why the Nigeria National Communication NCC, fined the MTN network provider. He said: “This is the first time I will personally as a president be making a public comment about it. The concern of the federal government is basically on the security and not the fine imposed on MTN. You know how the unregistered GSM are being used by terrorists. “And between 2009 and today, at least 10,000 Nigerians were killed by Boko Haram. That was why NCC asked MTN, Glo and the rest of them to
register GSM. Unfortunately, MTN was very, very slow and contributed to the casualties” (Buhari, 2016, March, 08).

2.4 GPS Driver’s License

A GPS tracking unit is a device that uses the Global Positioning System to determine the precise location of a vehicle, person, or other asset to which it is attached and to record the position of the asset at regular intervals. The recorded location data can be stored within the tracking unit, or it may be transmitted to a central location database, or internet-connected computer, using a cellular (GPRS), radio, or satellite modem embedded in the unit. This allows the asset's location to be displayed against a map backdrop either in real-time or when analyzing the track later, using customized software. A GPS tracking system uses the GNSS (Global Navigation Satellite System) network. This network incorporates a range of satellites that use microwave signals which are transmitted to GPS devices to give information on location, vehicle speed, time and direction. So, a GPS tracking system can potentially give both real-time and historic navigation data on any kind of journey. A GPS tracking system can work in various ways. From a commercial perspective, GPS devices are generally used to record the position of Objects e.g vehicles as they make their journeys. Some systems will store the data within the GPS tracking system itself (known as passive tracking) and some send the information to a centralized database or system via a modem within the GPS system unit on a regular basis (known as active tracking).

GPS tracking System is one of the most rapidly growing technologies around the world. Most developed countries have focused on the GPS technologies in resolving some of their inherent security problems. According to (Michael K., McNamee A. 2006) Global Positioning System (GPS) is increasingly being adopted by private and public enterprise to track and monitor humans for location based services (LBS). A location-based service (LBS) is information or entertainment service, accessible with mobile devices through the mobile network and utilizing the ability to make use of the geographical position of the mobile device. LBS can be used in a variety of contexts, such as health, indoor object search, entertainment, work, personal life, etc. LBS include services to identify a location of a person or object, such as discovering the nearest banking cash machine or the whereabouts of a friend or employee. LBS include parcel tracking and vehicle tracking services.

2.5 Explosive Device Detectors

Nowadays a lot of attention is being paid to the development of methods and instrumentation for the detection of explosive devices. Initiated explosives have already killed thousands of people and injured several tens of thousands worldwide not only Nigeria. Infrastructural facilities, like railway stations, airports, undergrounded railways, security offices, electricity, water supply, etc. are preferred targets involving up to thousands of people. Assuming, the methods will be found to early detect explosives by means of sensors.

New forms of bomb attacks are more sophisticated, more dangerous, using remote control of Improvised Explosive Devices (IED); initiation by mobile phones permits terrorists to initiate a bomb immediately. Therefore, detection systems with a reliable detection efficiency used in broad range of IEDs are an important problem. An IED is an improvised explosive charge, equipped with a non-standard (home-made) or a professional detonator. But, an Improvised Explosive (IE) may be any chemical or mixture capable of an explosive reaction.

IED detection techniques can be divided into two groups: bulk detection of explosives, and trace detection of explosives. In bulk detection, a macroscopic mass of explosive material is detected directly, usually by viewing images made by X-ray scanners or similar equipment. In trace detection, the explosive is detected by chemical identification of microscopic residues of the explosive compound. These residues can be applied in either or both of two forms: vapor and particulate.
Vapor detection refers to gas-phase molecules emitted by a solid or liquid explosive. The concentration of explosives in the air is related to the vapor pressure of the explosive material and to other factors, such as the duration of the presence of explosive material in the given location, its packing, temperature, air circulation in the location, etc.

III. MATERIAL AND METHOD

Journals, conference papers, reports, Newspapers, textbooks were used as both primary and secondary means for obtaining data that ultimately lead to successful formation of this research paper. Although unofficial interviews were made at random with people of different profession and discipline.

IV. CONCLUSION

With the adoption of the mentioned ICT applications, a significant surveillance can be yield where a lot of activities can be monitored and controlled, the government or the agencies involved in the proper enhancement of the security can use all these applications in order to have additional two eyes from the two they are having especially the use of the CCTV, where there is a lot surveillance coverage to what are the activities going on in a particular location. The citizens of Nigeria demand a better life than the one currently being enrolled by some of their leaders, security is one of the basic needs of this life, without the security the citizens cannot carry on with their life and this can lead to a mislead generation as found in Syria where a lot of people are leaving the country in search for a better life across the world.

The current security situation in Nigeria is totally not acceptable by the citizens. With the latest technology advancement and applications all over the world, a lot can be achieved and monitored such as CCTV to monitor movement and visuals to what is going on in a certain location. National identity can also be used to controlled and know the number of people living in a particular location where each and every member of the society have to uniquely be identified and can be tracked with National Identity card he is holding which is GPS enabled. Nevertheless proper SIM registration can also be monitored as to each and every online SIM will be identified when the need arises and communication transmission of that particular SIM can be monitored especially a suspect.

V. RECOMMENDATION

According to (Obasanjo, 2016) suggest the use of technology to tackle insurgency in Nigeria. For the government and National Security agencies to restored security they must rise to their responsibilities and take back control of their Cyberspaces and the transmissions that go on here and there, As the user-base and new technology keeps evolving where more sophisticated and enhanced devices keep emerging, it becomes only imperative and inductive that the National Security forces implement technology or ICT applications proactively in order to manage the new trend of events and data transmission nationwide. The security should be nationwide not only implementing it in areas affected by crimes.

Moreover, the authors recommend and emphasize the fact that the responsibility of National Security lies also in the hands of the citizens and not the security agencies alone. National security is all about people, and the people must also duly contribute their part as they all strive to restore peace and security to this blessed Nation. Every suspicious transmission, movement, communication within the circle of reach of every citizen must be reported to the nearest and appropriate authorities for prompt action to be taken. The citizens have to be ready to comply and also have in mind that security is ever bodies business.
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REFERENCES