

Judicial Admissibility of Satellite Data/Evidence in Nigerian Courts

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While it is appalusive that some modern societies' legal systems increasingly rely on technological tools and pieces of evidence to help the enforcement and application of domestic and international law, it may not be wrong to say that others have legal systems that do not support on all fours the reliance on such tools and pieces of evidence. The Courts of those societies, therefore, face serious challenges coping with the development. Nigerians courts and legal practitioners were faced with such challenges for a long time, until June 2011, when the new Evidence Act was enacted to repeal the Evidence Act, Cap E14. This paper focuses on the admissibility of satellite data/evidence in Nigerian courts in the light of the old and the new evidence law, using the available case laws. It expresses the views of the Nigerian judges and lawyers on the admissibility of such evidence in Nigerian courts under the Nigerian Evidence law. It then summarizes the discussions and gives suggestions and recommendations.

Introduction

Nigeria joined her counterparts in the field of remote sensing and associated areas in October 1996, when it established the National Centre for Remote Sensing, Jos, to build capacity in satellite data applications, implement space application program of national importance, acquire satellite data from various satellites and operate multi-choice satellite archiving station. There has not been any legislation specifically covering the field of remote sensing and the associated areas. More so, till date, unlike the cases in most sophisticated jurisdiction like the United States, United Kingdom etc, satellite data has not been used as evidence in Nigerian Courts. This does not mean, however, that there have not been issues on other electronically-generated or computer-generated evidence, especially with the rise in the use of computers and other form of electronic storage and communication system, especially in commercial and financial transactions.

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Remote sensing technological tools have helped most legal systems in the enforcement and application of domestic and international law. For instance, satellite images have been used to determine cases in the International Court of Justice (ICJ) and other national courts. In United States for instance, several cases on the different stages in the collection of data from space as follows:¹

1. Earth observation satellites collect the raw data which they send to ground stations. In this primary state the data has no real value and must be processed.
2. The first step – known as processing – is to rectify radiometric and geometric distortions.
3. Next, the raw data becomes available in digital form and certain aspects of the picture may be enhanced, at the user's request, by means of computers.
4. The user may then ask for the classification of the information gathered, bringing together, for instance, similarities and differences.
5. Ancillary information, such as maps, may be added to prove the results of the satellite image.

A close look at the above shows that at every stage of this data collection, the use of computer is a necessary tool. Therefore, from the first stage of data collection from space through satellites, to the remote sensing and geospatial data evidence have been determined in its Supreme Court, Court of Appeal, Federal District Court, and State Court. In the ICJ, satellite data was used in the cases between Mali and Burkina Faso, Namibia and Botswana, Qatar and Bahrain, and Nigeria and Cameroon.

The Space Law Committee of the 2004 Berlin Conference, in its report written by Professor Dr Maureen Williams, Chairman of the Committee, stated processing and use of such data, the use of computer is a necessity.

Based on the above circumstances, the views of Nigerian lawyers and Judges on the admissibility of such evidence in Nigerian courts are expressed. This is done through the questionnaire administered to them, testing their knowledge on what they know about data, satellite, satellite data, the admissibility of such data in the courts, the case law in the area, and the position of the old and the new Evidence Acts with respect to admissibility. We will at this junction attempt a working definition, for the purpose of this work, of data and Satellite data.

What Is Data?

Data is any collection of related facts arranged in particular format; it is often, the basic elements of information that are produced, stored, or processed by a computer.² Data are a representation, abstraction or model

1 See the Report on the Legal Aspects of the Privatization and Commercialization of Space Activities – Remote Sensing and National Space Legislation 2004. Cited in this report is Herald Ginzky, 2000, *Satellite Images as Evidence in Legal Proceedings Relating to the Environment – US Perspective*, Air and Space Law, Vol XXV, Kluwer, at p. 115.

2 See Sommer S. and Wade T. (eds), 2006, *A to Z GIS: An Illustrated Dictionary of Geographic Information System*, California: ESRI Press, p. 48.

of reality.³ Data can be acquired directly from the environment (primary sources) or from others who have already collected the data (Secondary source).⁴

What is Satellite Data?

From the above definition of data, satellite data are, therefore, a collection from space, of related facts arranged in particular format by a device called satellite. Satellite data can be maps, charts, images.

Admissibility of Satellite Evidence in Nigerian Courts

As can be seen from the stages of collection of data from space, satellite evidence or data are fully computer-based, from the stage of data collection through processing to use. Satellite evidence is documentary evidence, under the Nigerian Evidence Law. The Evidence Act, Cap E14 Laws of the Federation of Nigeria 2004, defines *document* to include:

books, maps, plans, drawings, photographs ... and any matter expressed or described upon any substance by means of letters, figures or marks or by more than one of these means, intended to be used or which may be used for the purpose of recording that matter.⁵

This definition is on all fours with one part of the definitions given in Evidence Act Cap E14 2011.⁶

Although the 2004 Act in defining document, does not specifically mention evidence from satellite, its description of document which includes data from satellite like maps, photographs, etc, as seen above, encompasses satellite evidence.

As earlier mentioned, there have not been cases involving admissibility of satellite evidence in Nigerian courts. However, there is plethora of cases dealing

3 See Atkinson P. M. and Tate N. J., “*Extracting Information from Remotely Sensed and GIS Data*”, in: Atkinson P. M. and Tate M. J., 1999, *Advances in Remote Sensing and GIS Analysis*, Chichester: John Willey and Sons, p.263-267, citing Gatrell A. C., “*Concepts of Space and Geographical Data*”, in: Maguire D. J., Goodchild M. F. and Rhind D. (eds), 1991, *Geographic Information Systems: Principles and Applications*, Vol. I, London: Logman Publishers, p.119-134; Burrough P. A. and McDonnell R. A., 1998, *Principles of Geographic Information Systems: Spatial Information Systems and Geostatistics*, New York: Oxford University Press.

4 Krygier J. and Wood D., 2005, *Making Maps: A Visual Guide to Map Design for GIS*, New York: The Guilford Press, p. 56.

5 Section 2.

6 See Section 258 of the Evidence Act Cap E14 2011. This section further elaborated the definition of document.

with computer-generated evidence.⁷ More so, before the enactment of the Evidence Act Cap E14 2011, there was no specific or direct provisions on admissibility of statements in documents produced by computers, there are, however, admission of such by Nigerian courts under the Act. The old Evidence Acts, only mentioned and placed satellite imagery under “Statements made in Special Circumstances”, which are relevant facts. For instance, Section 40 of the Act⁸ makes provision for relevancy of statements in maps, charts and plans. This section is also reproduced in Section 53 of Evidence Act Cap E14 2011. It provides:

Statement of fact in issue or relevant facts made in published maps or charts generally offered for public sale, or in maps or plans made under the authority of Government, as to matters usually represented or stated in such maps, charts or plans, are themselves relevant facts.

The Evidence Act Cap E14 2011 has cleared the doubt surrounding the admissibility of satellite evidence or data in Nigerian courts through its Section 84. It makes provision for the admissibility of statements in documents produced by computers. It further elaborated the definition of *document*, to include:

Any disc, tape, sound track or other devices in which sounds or other data (not being visual images) are embodied so as to be capable (with or without the aid of some other equipment) of being produced from it; and any film, negative, tape or other device in which one or more visual images are embodied so as to be capable (with or without the aid of some other equipment) of being produced from it; and any device by means of which information is recorded, stored or retrievable including computer output.⁹

Therefore, in any proceeding a statement contained in a document produced by a computer shall be admissible as evidence of any fact stated in it of which direct oral evidence would be admissible, if it is shown that certain conditions are satisfied in relation to the statement and computer in question.¹⁰ These conditions are as follows:

- (a) That the document containing the statement was produced by the computers during a period over *which the computer was used regularly to store or*

7 F.R.N. V. Fani Kayode (2001) 14 NWLR (PT.1214) PG 481; Oghoyone V. Oghoyonr (2010) 3 NWLR (PT.1182) P. 564 PARAS E-A.; Anyaebosi V. R.T. Briscoe (Nig) Ltd (1987) 6 SC PG 15 where the supreme court held that a computerized statement of account is secondary evidence of the original and it is therefore admissible if the provisions of section 79 of the evidence act are complied with ; Trade Bank V. Chami (2003) 13 NWLR (PT.863) 185; Yesufu V. A.C.B. (1976) 4 SC P 1; A.C.B. V. Oba (1993) 7 NWLR (PT.304) P 173; P.B. Olatunde & Co V. N.B.N Ltd (1995) 3 NWLR (PT.385) P 550; etc.

8 Evidence Act (Cap 112) 1991 and Evidence Act (Cap E14) LFN 2004.

9 See Section 258 of Evidence Act Cap E14 2011.

10 See Section 84(1) of the Evidence Act Cap E14 2011.

process information for the purposes of any activities regularly carried out over that period, whether for profit or not, by anybody, whether corporate or not, or by any individual;

- (b) That over that period there was regularly supplied to the computer in the ordinary course of those activities information of the kind contained in the statement or of the kind from which the information so contained is derived;
- (c) That throughout the material part of that period the computer was operating properly or, if not that in any respect in which it was not operating properly or was out of operation during that part of that period was not such as to affect the production of the document or the accuracy of its contents; and
- (d) That the information contained in the statement reproduced or is derived from supplied to the computer in the ordinary course of those activities.¹¹

The conditions described above are conditions precedent to the admissibility of evidence from documents produced by computers.

It should be noted that all the computers used shall be treated as constituting a single computer, where over a period the function of storing or processing information for the purposes of any activities regularly carried on over that period was regularly performed by computers, whether – by a combination of computers operating over that period; or by different computers operating in succession over that period; or by different combinations of computers operating in succession over that period; or in any other manner involving the successive operation over that period, in whatever order, of one or more computers and one or more combinations of computers.¹²

In any proceeding where it is desired to give a statement in evidence by virtue of Section 84, a certificate – identifying the document containing the statement and describing the manner in which it was produced; giving such particulars of any device involved in the production of that document as may be appropriate for the purpose of showing that the document was produced by a computer; and dealing with any of the matters to which the conditions mentioned in subsection (2) above related, and purporting to be signed by a person occupying a responsible position in relation to the operation of the relevant device or the management of the relevant activities, as the case may be – shall be evidence of the matter stated in the certificate; and for the purpose of this subsection it shall be sufficient for a matter to be stated to the best of the knowledge and belief of the persons stating it.¹³

For the purposes of section 84 – information shall be taken to be supplied to a computer if it is supplied to it in any appropriate form and whether it is supplied directly or (with or without human intervention) by means of any appropriate equipment; where, in the course of activities carried on by any individual or body, information is supplied with a view to its being stored or processed for the purposes of those activities by a computer operated otherwise than in

11 See Section 84(2).

12 See Section 84(3).

13 See Section 84(4).

the course of those activities, that information, if duly supplied to that computer, shall be taken to be supplied to it in the course of those activities; and a document shall be taken to have been produced by a computer whether it was produced by it directly or (with or without human intervention) by means of any appropriate equipment.¹⁴

According to Professor Yemi Osinbajo,¹⁵ ‘the peculiarity of problems associated with proof of electronic transactions and electronically generated evidence stem from the fact that they are paperless transactions.’ He identified another problem that computer generated evidence presents – whether the computer print-out can be regarded as an “original” (or primary evidence of the content of the documents). Or should it be the raw information as contained on the magnetic tape or other such devices. Where a print-out is regarded as being secondary evidence, it would mean that it is prima facie inadmissible until satisfactory foundation evidence of the non-availability of the original is adduced.¹⁶ While this position is true to some extent,¹⁷ I would like to say here that the 2011

Evidence Act Cap E14 has partly taken care of some of these problems; these were serious problems before the enactment of the 2011 Act. The combined effects of Sections 51, 52, 84, 85, 86, 87, 88 and 89 make the evidence admissible. These sections, if read together, can solve some of the problems of proof, whether ‘paperless transactions’ or ‘print-out’ as the case may be. This does not mean that there are no conflicts in the provisions. However, one fact that is needed to be proved is accuracy.¹⁸

It is noteworthy to state that satellite data bases cannot conveniently be examined in court by lawyers and judges, who are non-experts.¹⁹ Therefore, the need for expert examination and explanation is necessary. They are, however, in the form that can be easily movable²⁰ as technology has made it easy to put a whole data base in a very small hardware device.

The 2011 Evidence Act makes entries in electronic records admissible. This was not the case in the old Evidence Act. Section 51, which is in support of section 84 of Evidence Act Cap E14 2011 provides: Entries in books of accounts or electronic records regularly kept in the course of business are admissible whenever they refer to a matter into which the court has to inquire, but such statements shall not alone be sufficient evidence to charge any person with liability.

14 See Section 84(5).

15 See Osinbajo Y., “*Electronically Generated Evidence*” in: Babalola A. (ed), 2001, *Law and Practice of Evidence in Nigeria*, Ibadan: Sibon Books Limited, p. 243-273.

16 Ibid, p. 259.

17 The author’s research was made before the Evidence Act Cap E14 2011.

18 See Sections 84 and 86 of Evidence Act 2011.

19 See Section 89(g).

20 See Section 89(d).

Also, section 52 provides as follows:

An entry in any public or other official books, register or record, including electronic record stating a fact in issue or relevant fact and made by a public servant in the discharge of his official duty, or by any other person in the performance of a duty specially enjoined by the law of the country in which such book, register or record is kept, is itself admissible.

Views of Nigerian Lawyers and Judges

During the period of researching on this paper, a questionnaire was developed and administered to Nigerian lawyers and Judges to ascertain their views on the admissibility of satellite evidence in Nigerian courts in the light of the old and the new Evidence Acts. The questionnaire contained eight (8) short questions that were based on their knowledge of data, satellite, satellite data and the position of the Nigerian Evidence Law on the admissibility of satellite evidence. Nineteen (19) responses were received out of the thirty (30) questionnaires administered. Part of the responses got from the respondents show that space law dissemination is still poor in Nigeria. On one hand, Nigerian lawyers' knowledge of satellite and its associated technology is still very limited. Only few of the respondents know about space law and satellite technology, and could link satellite evidence to computer generated evidence.

On the other hand, the Nigerians Judges that were approached had their reservations, and were not ready to answer questions on the issue. According to them, such issues are better treated in court when they arise. Therefore, their views about the admissibility of such evidence cannot be aired.

Summary

There have not been cases on the admissibility of satellite evidence in Nigerian courts. There are, however, cases on computer or electronically generated evidence. And the stages of data collection from space by satellite to the use of such data are basically computer-based. Despite the fact that there was no substantial provision on the old Evidence Act on the admissibility of statements in documents produced by computers, there have been cases where such evidences were admitted. Because there is no specific provision on the admissibility of computer or electronically generated evidence under the old Evidence Act, the admissibility of such evidence presents series of problems. The Evidence Act Cap E14 2011 has come to clear some doubts on some of the issues of admissibility of electronically or computer generated evidence and lay to rest some of the problems being faced or that are likely to be faced, through its provisions in Sections 51, 52, 84, 85, 86, 87, 88 and 89. However, the Act has equally created other problems, as some provisions are in conflict with others. despite the provision on the admissibility of statements in documents produced by computers in the Evidence Act Cap E14 2011, the provision on the cases in

which secondary evidence may be given of the existence, condition or contents of a document is misleading, going by the fact that there are doubt whether computer print-out falls under secondary evidence. There are also doubts as to whether what would roughly approximate the original of a print-out is the information storage facility in the computer in which the records are kept in magnetic form.²¹

Suggestions and Recommendation

One, there should be established rules for the admissibility of scientific data as standard based on general acceptance for the relevant scientific community just as it is being done in California. The ‘prongs’ of the standard should be as follows: 1) The scientific test’s reliability must be established by its general acceptance in the relevant scientific community; 2) The testifying witness must be properly qualified; and 3) The proponent of the evidence must demonstrate that the correct scientific procedures were used.²²

Two, an atmosphere should be created whereby satellite image interpreters will act as expert witnesses in Nigerian courts. There are so many of these experts in Nigerian Universities and the National Space Research and Development Agency.

Lastly, there is need to harness the provisions of Section 84 of the Evidence Act Cap E14 2011 with that Section 89 of the same Act. This will remove the conflict that the Act has created.

References

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2. Sommer S. and Wade T. (eds), 2006, *A to Z GIS: An Illustrated Dictionary of Geographic Information System*, California: ESRI Press.

21 See Osinbajo Y., “*Electronically Generated Evidence*” in: Babalola A. (ed), 2001, *Law and Practice of Evidence in Nigeria*, Ibadan: Sibon Books Limited, p. 260, citing Colin Tapper, *Computers and the Law of Evidence* in: *Computer and the Law*, Widenfield and Nicholson, London Chapter 2 pg 16. Richard Bernachi and R.L. Johnson, *Trial Objections to Computer-based Evidence and Method of overcoming them*. Rutgers Journal of Computers and the Law, Vol. 31973, Number 1 page 341.

22 See Barton P. Simmons, “*Using Field Methods - Experiences and Lessons: Defensibility of Field Data.*” Available at <www.clu-in.org/download/chart/legalpap.pdf>. Visited on 2 September 2012. See also *People v. Kelley*, 17Cal.3d 14 (1976), cited by Barton P. Simmons (Supra).

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