TSULJ Volume 1 No. 1, 2023 ISSN: 2992-5983

TARABA STATE UNIVERSITY LAW JOURNAL (TSULJ)

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TARABA STATE UNIVERSITY
LAW JOURNAL (TSULJ)

Volume 1 No. 1, 2023 ISSN: 2992-5983

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TSUFJ Volume 1 No. 1, 2023

Published By

Taraba State University Press
and Entrepreneurship Service Limited,
Jalingo, Taraba State, Nigeria

EDITORIAL NOTE

The idea to float a journal by the Faculty of Law, TSU, was conceived in 2021. The hurdles it went through to make a successful appearance were numerous. Thankfully, they were all surmounted and today, we have emerged. This is the first edition in the series and it is to be cited as **Taraba State University Law Journal (TSULJ)** Volume 1 No. 1. 2023. The journal aims at promoting legal scholarship and to provide high quality materials for both students and the general public. Nine articles are published in this edition. The articles are well researched and reflect on legal issues which have the potentials of contributing very significantly to the development of Nigerian jurisprudence in a way that will allow law to be responsive to contemporary challenges. The articles make very interesting reading and address a wide range of issues in the broad fields of Jurisprudence and International Law, Constitutional and Human rights Law, Criminal Law, Law of Evidence and so on. Each of them, with very impressive and incisive prognosis on the legal issues diagnosed.

All the articles contained in this edition were subjected to blind peer-review by external assessors and members of the editorial board. Consequently, the thoughts and perspectives presented in this edition offers practical and critical insights for legal and non-legal scholars about various aspects of international, regional and domestic laws. The issues discussed in the journal is anticipated to serve as a catalyst for creating and promoting positive impact within legal education. The range of the discourse in the essays can only be correctly assessed by the reader going through the expansive subjects that the authors have focused their radars on.

The Faculty looks forward to the sustainability of the journal as it holds vistas for serving as a medium of legal standard communication to develop the laws and institutions of Nigeria.

The articles in this journal promises to be very informative and illuminating. They are worth reading and will most certainly be useful and serve as a valuable and veritable resource and reference materials for academics, all categories of students, researchers, scholars, legislators and policy makers.

Professor Benedicta Daudu
Editor – in – Chief
2023

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ELECTRONICALLY STORED INFORMATION UNDER THE UNITED STATES FEDERAL RULES OF EVIDENCE: A RE-ANALYSIS

By

Rilwan F. Mahmoud*

ABSTRACT

The traditional classifications of evidence have remained substantially unchanged. However rapid advancements in technology have necessitated the need to re-evaluate the fundamental rules of evidence. While the rules of evidence such as being documentary, real or oral in nature have been applied effortlessly, the transient nature of electronically stored and generated information provides a unique challenge. Information generated as electronic data are intrinsically fluid and determining whether they can be categorised as being documentary or real evidence requires an unorthodox yardstick. This research examines the transition of The United States Federal Rules of Evidence, as well as the relevant judicial decisions, in integrating the novelties of electronic evidence particularly on the admissibility and weight accorded. The research evaluates the practicality of applying evidential criteria including relevance, authenticity, hearsay, and the best evidence rule to electronically stored information under the Federal Rules of Evidence. The paper reveals that there remain substantial hindrances to the application of conventional rules of evidence to electronically stored information, particularly as regards information created with little intervention by humans for the purpose of appropriately authenticating such evidence and ascribing value to it. The paper also reveals disparities in the judicial approach to the evaluation of electronically stored information. The research recommends amendments to the Federal Rules of Evidence including clearer definitions of what constitutes electronic information which are statements, electronic information that is contained in documents and electronic information that are created wholly by electronic algorithms and software.

Keywords: Evidence, Hearsay, Admissibility and Weight.

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1. INTRODUCTION

The cardinal rules of admissibility of evidence have essentially remained unchanged in several jurisdictions: evidence must be relevant, authentic, and reliable and must conform to the best evidence rules.[1] In applying these rules to electronic evidence, the peculiarities of its nature ought to be considered.[2] Such peculiarities include the fact that the standards applicable in considering the best evidence rule of a written document cannot adequately be applied to electronic evidence because of its transient nature.[3] Evidence that will otherwise suffice as secondary evidence might not contain all the information in the primary source and just as well, a piece of evidence considered to be an original can be a transferred copy that might omit some information from the original source.[4] In the same light, rules applicable to issues of authenticity and reliability of most documents might not be applicable to electronic evidence. This is because there might not be a human maker of the evidence and whatever information the programmer or the person who writes the instructions into the electronic device might offer can end up being hearsay.[5]

It is, therefore, necessary to consider a wide range of technical issues in addressing what rules should govern the admissibility of electronic evidence.[6] Upon clearance of the yardsticks of admissibility of electronic evidence, the court will be faced

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[1] *Lorraine v Markel Am. Ins. Co.*, 241 F.R.D. 534 (D. Md. 2007).
[2] GMichael Fenner "The admissibility of Web-based evidence" 47 *Creighton L. Rev.* 63 2013-2014.
[3] Id at 63.
[4] Id at 65.
[5] Steven Goode "The Admissibility of electronic evidence" *The Review of litigation*. Vol 29. 1 2009-2010.
[6] Rilwan F. Mahmoud, Abdulazeez, H. O. & Wuraola, O. T. "An Assessment of the Legal Recognition and implementation of Electronic Evidence in the Tanzanian and Nigerian Legal Systems" (2019) The Public and International Law Journal, University of Abuja. 1(1).

with weighing its evidential value. While the rules governing weight to be attached to evidence are often more discretionary and are peculiar to the facts at hand, electronic evidence offers valuable impute to such rules in many forms. It is for these reasons that applying the same rules regarding the weight of other types of evidence to electronic evidence might result in a miscarriage of justice.

2. Regulation of the Admissibility and Weight of Electronic Information in the United States of America.

Before electronic devices became so commonplace, the rules of evidence have long since existed to regulate among other fields, 'the world of paper'.[7] However, since paper has become ubiquitous and the understanding of its workings and uses has been commonplace for a long time, it now requires very little or no searching inquiry.[8] This will hopefully be the fate of electronic evidence or Electronically Stored Information (ESI) as it is better known in the USA, but until then, judicial systems across the world still approach ESI with extreme caution, partially because the courts and judges, in particular, have far more experience with paper-based evidence than electronic evidence. Also, a lack of familiarity with technology can result in judges lacking confidence in the integrity of the electronic evidence placed before them.[9] Finkelstein and Storch suggest that in the not so distant future when more and more legal practitioners will have grown up on the culture of electronic devices, the cautiousness that has been shown to electronically stored information in the courtrooms will drastically reduce to such an extent that the criteria for the admission of ESI will be less tedious. But in the meantime, there is

[7] Kenneth N Rashbaum, Matthew F Knouff &Dominique Murray "Admissibility of Non-U.S. Electronic Evidence" XVIII *Rich. J. L. & Tech.* 9 (2012), http://jolt.richmond.edu/v18i3/article9.pdf.

[8] Id.

[9] Id.

still a very high level of scepticism by legal practitioners and judges and this is reflected in the procedural laws that seem to highlight a bias against novel ESI devices.[10] More than a century ago, trial courts in the United States objected to the idea of admitting photographs.[11] In 1989, a court held thus:

> Either through want of skill on the part of the artist, or inadequate instruments or materials or through intentional and skilful manipulation, a photograph may be not only inaccurate but dangerously misleading.[12]

Another court did not allow a recorded conversation to be admitted, stating the ground of refusal to be that 'we know of no case, and counsel cites none, in which a phonograph record of an alleged conversation was admitted in a court of law as evidence'.[13]

This attitude to ESI has been reflected recently in *St. Clair v Johnny's Oyster & Shrimp, Inc.* where the court held that any information gotten from the internet presented to a court is of no value as evidence:[14]

> While some look to the Internet as an innovative vehicle for communication, the Court continues to warily and wearily view it largely as one large catalyst for rumour, innuendo, and misinformation...Anyone can put anything on the Internet. No

[10] S M Finkelstein and Evelyn R Storch, "Admissibility of Electronically Stored Information: It's Still the Same Old Story" 23 *J. Am. Acad. Matrimonial Law.* 45, 46 (2010).
[11] S Goode "The Admissibility of electronic evidence" *The Review of litigation* Vol 29. 1 2009-2010 (citing the case of *Cunningham v Fair Haven & Westville R. Co.*, 43 A. 1047, 1049 (Conn.1899).
[12] *Cunningham v Fair Haven & Westville R. Co.*, 43 A. 1047, 1049 (Conn.1899). Cited in Steven Goode "The Admissibility of electronic evidence" *The Review of litigation* Vol 29. 1 2009-2010.
[13] *State v Simon*, 174 A. 867, 872 (N.J. Sup. Ct. 1934), 178 A. 728 (N.J. 1935) cited in Steven Goode "The Admissibility of electronic evidence" *The Review of litigation* Vol 29. 1 2009-2010.
[14] *St. Clair v Johnny's Oyster & Shrimp, Inc.*, 76 F. Supp. 2d 773, 774-75 (S.D. Tex. 1999)

> website is monitored for accuracy and nothing contained therein is under oath or even subject to independent verification absent underlying documentation. Moreover, the Court holds no illusions that hackers can adulterate the content on any website from any location at any time. For these reasons, any evidence procured off the Internet is adequate for almost nothing... Instead of relying on the voodoo information taken from the Internet, the Plaintiff must hunt for hard copy back-up documentation in an admissible form...[15]

However, as a result of the heavy reliance on electronic devices in the social and business realm today, computer-generated and computer-stored records are ubiquitous, and this has led to admissibility standards of ESI being substantially relaxed.[16] A court in New Jersey stated recently that, electronic devices are now commonplace around the world and are an essential part of work and, as a result, social interactions enjoy the presumption of reliability.[17] It remains a recurrent argument in the academic parlance in the United States that the conventional rules of regulating evidence that have been in place before electronic evidence is sufficient to regulate information in the form of data messages created by electronic devices and that the introduction of ESI raises particularly substantial complexities so much as to require any drastic amendments to the rules regulating

[15] Id, cited in Steven Goode "The Admissibility of electronic evidence" *The Review of litigation* Vol 29. 1 2009-2010.

[16] S Goode "The Admissibility of electronic evidence" *The Review of litigation* Vol 29. 1 2009-2010.

[17] *Garden State Bank v Graef*, 775 A.2d 189, 192 (N.J. Super. Ct. App. Div. 2001), quoting *Hahnemann Univ. Hosp. v Dudnick*, 678 A.2d 266, 269 (N.J. Super. Ct. App. Div. 1996).

evidence.[18] While the foundational rules regulating evidence have not changed, the electronic medium in which information is presented as evidence is still relatively novel and it might take some time for legal practitioners to reconcile them.[19] A substantial portion of the Federal Rules of Evidence was drafted in the 1960s, long before electronic devices became common-placed hence; the rules were not drafted with ESI in the mind of the legislators.[20] The primary rules regulating procedure evidence in the United States today are both the Federal Rules of Civil Procedure (FRCP) and the FRE.[21]

Before 2006, the FRCP did not yet include provisions that addressed the issues presented by ESI until it became live issues in the courtroom with the development of technology.[22] The FRCP was then amended in 2006 with the aim of introducing further practice directions for the discovery of electronically stored information.[23] Although the e-discovery amendments to the FRCP in 2006 provided the practice directions, they did not extend to the admissibility of electronic evidence during the course of the trial proceedings.[24] Examples of such amendments include an amendment to Rule 26(f) of the FRCP which now requires parties to have a dialogue with a view to developing a plan for issues relating to disclosure and

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[18] G Michael Fenner "The admissibility of Web-based evidence" 47 *Creighton L. Rev.* 63 2013-2014.

[19] Rilwan F. Mahmoud "The Potential of WhatsApp as a Medium of Substituted Service in the Nigerian Judicial System" (2019) Malaysia Current Law Journal, Legal Network Series. A (cx iii); 1.

[20] Steven Goode "The Admissibility of electronic evidence" *The Review of litigation*. Vol 29. 1 2009-2010.

[21] The Federal Rules of Evidence established in 1975 and amended to 2015 and The Federal Rules of Civil Procedure established in 1938 and amended to 2014.

[22] Jonathan L Moore "Time for an Upgrade: Amending the Federal Rules of Evidence to Address the Challenges of Electronically Stored Information in Civil Litigation" 50 *Jurimetrics J.* 147-193 (2010).

[23] Id.

[24] Id.

discovery of ESI particularly as regards the manner and medium in which they should be produced. Also, Rule 26(a) (1) (B) requires parties to furnish a list of all the ESI that is in their possession as well as any other evidence that may be used to support their case.

Another amendment in Rule 26 of the FRCP restricts the extent of discovery to be made where the electronically stored information is not easily accessible either because of the cost or gross inconvenience recognising that multiple issues can arise in the course of collecting ESI, like information contained in deleted files which might require expertise and a lot of time to retrieve.[25] Also, Rule 34(b) of the FRCP provides a default procedure for the production of ESI. Recognising that ESI may exist in several forms, the law allows a request for discovery to define the form in which the ESI should be presented.[26] Rule 33 of the FRCP also allows pre-trial questions to be replied to electronically by producing the ESI of the business records.[27] These are just a few of the modifications to the FRCP that have not only acknowledged the uniqueness of electronically stored information but have made changes to the rules regulating interaction with ESI in legal proceedings.

The amendments, however, focus primarily on ESI in the discovery stage of litigation. Following the 2006 amendments to the FRCP, much has been written about the discovery of ESI but there remain a lot of unanswered questions about

[25] Rule 26 of The Federal Rules of Civil Procedure.

[26] J L Moore "Time for an Upgrade: Amending the Federal Rules of Evidence to Address the Challenges of Electronically Stored Information in Civil Litigation" 50 *Jurimetrics J.* 147-193 (2010).

[27] Id.

the admissibility of ESI into evidence at trial.[28] This is rather inapt in light of the fact that there are huge expenses that go into the disclosure of ESI, it seems ineffective to go to all the trouble and cost to get electronic data just to have it rejected from the list of evidence to be considered during the summary judgment proceedings because the party did not furnish the necessary requirements for admission.[29]

While there have been no substantial changes in the FRE, the novelty of the field of evidence of ESI raises questions as to whether changes are required in the FRE. It has been argued that the ubiquity of electronic information does not necessitate drastic amendments to the FRE and that it is often better to evaluate ESI as beginning from the most relatable alternative as the application of conventional evidentiary standards will, more often than not, lead to the right outcome.[30]

These positions while plausible, do not take into account that it might become impractical and even absurd to apply some rules of evidence, particularly on hearsay and presumptions to evidentiary aspects of ESI. It is true that some rules that apply to paper evidence do apply equally well to evidence offered in an electronic format. If anything, the rules might end up applying a higher degree of

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[28]Further examples of articles on the Federal rules of Civil Procedure include; Major Scott A McDonald "Authenticating Digital Evidence from the Cloud" 2014 *Army Law*. 40 2014, Lucy L Thomson "Admissibility of Electronic documentation as evidence in U. S. Courts" http://www.crl.edu/sites/default/files/d6/attachments/pages/Thomson-E-evidence-report.pdf last accessed on 10December 2016, KN Rashbaum, Matthew F Knouff &Dominique Murray "Admissibility of Non-U.S. Electronic Evidence" XVIII *Rich. J. L. & Tech*. 9 (2012), http://jolt.richmond.edu/v18i3/article9.pdfand G Michael Fenner "The admissibility of Web-based evidence" 47 *Creighton L. Rev*. 63 2013-2014.

[29] J D Frieden & Leigh M Murray "The Admissibility of Electronic Evidence under the Federal Rules of Evidence" 17 *Rich. J.L. & Tech* 5 (2011).

[30] Id.

scrutiny to electronic information because of the fears related to volatility.[31] Some examples of issues that may be raised in this respect include questions on printouts such as whether they constitute hearsay if some of the information asserted on them are hearsay, whether the printouts fall short of the best evidence rule, and whether a court can take information from an internet page as matters of common knowledge for which the court can take judicial notice of.[32]

While evidence from an ESI does not show an especially difficult issue on as it relates to the substantive rules of evidence, it poses some procedural issues that arise from the ease at with which electronic information can be altered and the trouble and cost that might be incurred in identifying such alterations.[33] However, while evidence from an ESI might present some difficulties in relation to admitting evidence and further complicate the process of showing authenticity, it does not require the proponent to dispose of his insight into conventional evidentiary standards or get the hang of anything really new.[34] It then becomes necessary to consider the traditional rules that govern the admissibility of the evidence, particularly documentary evidence vis-a-vis the nature of ESI in adequately addressing some of these evidential issues.

Under the FRE, for documentary evidence to be admissible, it is required to fulfil six criteria. They are, 'Relevance, Authenticity, Reliability, Non-Hearsay, the Best

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[31] KN Rashbaum, Matthew F Knouff &Dominique Murray "Admissibility of Non-U.S. Electronic Evidence" XVIII *Rich. J. L. & Tech.* 9 (2012), http://jolt.richmond.edu/v18i3/article9.pdf.

[32] G Michael Fenner "The admissibility of Web-based evidence" 47 *Creighton L. Rev.* 63 2013-2014.

[33] S Goode "The Admissibility of electronic evidence" *The Review of litigation*. Vol 29. 1 2009-2010.

[34] J D Frieden & Leigh M Murray "The Admissibility of Electronic Evidence under the Federal Rules of Evidence" 17 *Rich. J.L. & Tech* 5 (2011); Keane A and McKeown P *The Modern Law of Evidence* (Oxford University Press 2014) at 10; *S v Mpumlo*1986 4 All SA 197 (E).

Evidence Rule and Probative Value vs. Prejudicial Effect'.[35] These standards more often than not, are co-dependent on the others so much so that proving one of them may establish one of the others.[36]

3. Authentication of Electronic Information under The Federal Rules of Evidence

Authentication as a precursor to the admissibility of evidence in US courts is primarily governed by the FRE, particularly rules 104 (b) and 901-903.[37] These criteria are required in addition to evidence corroborating a finding that the issue is what it was claimed to be.[38] The nature of ESI has raised questions as to what amounts to an adequate degree of sufficiency when authenticating such evidence and this challenge has been reflected in the courts. As Judge Grimm noted in *Lorraine v Markel*:[39]

> Counsel often fails to meet even this minimal showing when attempting to introduce ESI, which underscores the need to pay careful attention to this requirement. Indeed, the inability to get evidence admitted because of a failure to authenticate it almost always is a self-inflicted injury which can be avoided by thoughtful advance preparation.[40]

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[35] KN Rashbaum, Matthew F Knouff &Dominique Murray "Admissibility of Non-U.S. Electronic Evidence" XVIII *Rich. J. L. & Tech.* 9 (2012), http://jolt.richmond.edu/v18i3/article9.pdf.

[36] Id.

[37] Lucy L Thomson "Admissibility of Electronic documentation as evidence in U. S. Courts" http://www.crl.edu/sites/default/files/d6/attachments/pages/Thomson-E-evidence-report.pdf last accessed on 10December 2021.

[38] Rule 901(a) FRE.

[39] *Lorraine v Markel Am. Ins. Co.*, 241 F.R.D. 534 (D. Md. 2007).

[40] *Lorraine* 241 F.R.D at 542.

This does not mean that a proponent has to prove beyond a reasonable doubt that the evidence which is sought to be admitted is authentic. Rather, the proponent must satisfy a very minimal standard of proof that the evidence can be taken on the face of it, to be what it purports to be for the sake of admission with the evaluation of reliability being addressed instead at the stage of determining evidential value.[41] It is important to note that authenticating a document does not guarantee that the information contained in the document is automatically true, it only affirms that the document is in fact, what it prima facie claims to be.[42] No ironclad proof is required at this point as it is only necessary to establish sufficient proof from which inference could be made that the exhibit is in fact, what it is claimed to be, for example, furnishing sufficient proof that a letter is genuine or that a picture is an accurate depiction.[43]

A judge evaluates a piece of evidence for the purpose of eliciting rational sufficiency of the foundational evidence so for information in an electronic form to be admitted into evidence, it must be proven to be prima facie authentic.[44] Though there have not been a lot of innovations on modes of authenticating electronic evidence, the conventional rules regulating authentication are relevant and still applicable to electronic evidence and the courts have applied those rules to authenticate information from web pages and other electronic information.[45] These

[41]Major Scott A McDonald "Authenticating Digital Evidence from the Cloud" 2014 *Army Law*. 40 2014.

[42] De Villiers DS "Old 'documents', 'videotapes' and new 'data messages' – a functional approach to the law of evidence (part 1)" 2010 *Tydskrifvir die Suid-AfrikaanseReg* 573.

[43]Lucy L Thomson "Admissibility of Electronic documentation as evidence in U. S. Courts" http://www.crl.edu/sites/default/files/d6/attachments/pages/Thomson-E-evidence-report.pdf last accessed on 10December 2021.

[44] Id.

[45]Major Scott A McDonald "Authenticating Digital Evidence from the Cloud" 2014 *Army Law*. 40 2014.

a transcript of the American Online (AOL) chat records of Lanzon and the undercover agent.[52]

The prosecution also presented the witness statement of the agent who affirmed that he indeed played the role of the underage girl in the online discussion and gave details of his process of preparing the chat records with a view to establishing the reliability of the online chats and the Word document he made to ensure its content remained unaltered. As indicated by the court, the agent's testimony, as a witness with sufficient information, was adequate to show that the transcript of the online records was what it implied to be and was thus way adequately corroborated.

Another instance is the case of *Laurentz v State* where the state offered proof of Laurentz's Facebook messages to an underage victim who he had sexual relations with the previous night, in which Laurentz was remorseful and asked to be forgiven.[53] Laurentz tested the plausibility of the Facebook conversation, contending that the child's name was incorrectly spelled on the printout.[54] The court decided that the prosecution had adequately proved the validity of the messages through its witness and evidence brought in corroboration, and pointed out that the incorrect spelling of the child's name was only a factor for the jury to examine while ascribing some evidential value of the witness statement linking Facebook to the child.

3.2 Authentication by Evidence Comparison

Regarding authentication or identification, the light burden is satisfied when evidence is placed in comparison with specimens that have been authenticated on

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[52] Id.

[53] *Laurentz v State* 2013 Tex. App. Lexis 12603, at *1 5 (Tex. App. 2013) (Cited in Major Scott A McDonald "Authenticating Digital Evidence from the Cloud" 2014 *Army Law.* 40 2014).

[54] Id.

the opinion of an expert or a person authorised to give such an opinion.[55] For example, in *United States v Safavian*,[56] the prosecution presented information from an email, to be admitted into evidence, that had already undergone authentication through the 'distinctive characteristics' rules.[57]Also, the prosecution attempted to present further information contained in some other emails, but they did not possess similar distinctive characteristics.[58] The second set of emails only contained an email address which was similar to the authenticated email address and also included signature marks that bore the name of the accused and his business contacts.[59]

The court decided that the information contained in the authenticated emails adequately linked the accused to the second set of emails in question, therefore, under FRE 901(b)(3), by comparison, the second set of emails that contained only the Email address and no signature blocks were also properly authenticated as emails authored by the accused.[60]

3.3 DISTINCT CHARACTERISTICS

On distinct characteristics, evidence can be proven to be genuine or have its identity confirmed by its appearance and content or by unique patterns or other distinctive characteristics in light of the surrounding conditions.[61] For example in the case of *United States v Trujillo*, security agents accosted the accused[62] for his

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[55] 901(b)(3) FRE.
[56] 435 F. Supp. 2d 36, 41 (D. D. C. 2006).
[57] 901(b)(4) FRE.
[58]Major Scott A McDonald "Authenticating Digital Evidence from the Cloud" 2014 *Army Law*. 40 2014.
[59] Id.
[60]*United States v Safavian* 435 F. Supp. 2d 36, 41 (D. D. C. 2006) (Cited in Major Scott A McDonald "Authenticating Digital Evidence from the Cloud" 2014 *Army Law*. 40 2014).
[61] 901(b)(4) FRE.
[62] 146 F.3d 838, 842-43 (11th Cir. 1998).

alleged affiliations with a drug-smuggling cartel.[63] The accused was then processed following the standard booking practices.[64] At some point during the booking procedure, the accused sought to use the restroom but rather than relieving himself he took the chance to attempt to swallow a piece of paper which contained relevant information in connection with his arrest. When the agents noticed this attempt, they pulled him from the bathroom and saw a piece of paper in the toilet and they also recovered the remains of the paper from his mouth.

At the trial proceedings, the accused tested the validity of the pieces of paper but in light of the situation that led to the recovery of the paper as corroborated by the testimony of the security agents present, the court found that given the proximity of time and the conditions that led to its attainment, it was convinced that the evidence was authenticated under FRE 901(b)(4).[65] Also, with electronically stored information, metadata and other information are preserved with the ESI in the background of the author's work and every one of these procedures gives the author further materials to establish the reliability of the evidence via its own 'distinctive characteristics'.[66]

4. The attitude of the USA courts to the authentication of Electronically Stored Information

Because of the relatively few decisions on the authentication of ESI, there have been several disparities in the way courts have handled the subject. Honourable P. W. Grimm, a district court judge writes on this issue as follows:

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[63] *United States v Trujillo* 146 F.3d 838, 842-43 (11th Cir. 1998).
[64] Major Scott A McDonald "Authenticating Digital Evidence from the Cloud" 2014 *Army Law*. 40 2014.
[65] *United States v Trujillo* 146 F.3d 838, 842-43 (11th Cir. 1998).
[66] Major Scott A McDonald "Authenticating Digital Evidence from the Cloud" 2014 *Army Law*. 40 2014.

> The current state of the law regarding the admissibility of the evidence is in disarray, sending mixed and confusing messages to lawyers and judges alike and depriving them of the certainty to anticipate in advance of trial the likelihood of admission for social media evidence. Nowhere is this uncertain state more evident than in the near total absence in any of the reported cases of any recognition or application of the two evidence rules most important to make the correct ruling—Rules 104(a) and (b).[67]

The disparity in the approach is more apparent in judicial decisions and academic works as the US courts have categorised them as 'The Maryland Approach' and 'The Texas Approach'.[68] It should be noted that these divisions were made with a particular focus on social media evidence as the ESI in question. According to analysts, courts following the Maryland approach are wary of information from online sources, finding the chances too extraordinary that somebody other than the alleged creator of the evidence was the genuine author and trusting that the party tendering the evidence should irrefutably disprove the possibility of an alternative author for the information to be admitted. Courts that adhere to the Texas approach are progressively moderate when evaluating what measure of proof the 'reasonable juror' should need to be convinced that the alleged author created the information. The objecting party then has the burden to produce the evidence it claims was created by the third party.

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[67] P W Grimm, Lisa Yurwit Bergstrom, Melissa M O'Toole-Loureiro "Authentication of Social Media Evidence" *American Journal of Trial Advocacy* Vol. 36:433, 2013; *Dutch Reformed Church Vergesig v Sooknunan t/a Glory Divine World Ministries*2012 3 All SA 322 (GSJ); *Heroldt v Wills*2013 2 SA 530 (GSJ).

[68] W Angus-Anderson "Authenticity and Admissibility of social media website printouts" http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1282&context=dltr last accessed on 24December 2021.

4.1 The Maryland approach

This approach, which sets a higher standard for ESI authentication, is illustrated aptly by the Maryland Court of Appeals in *Griffin v State*.[69] The charges of second-degree murder, first-degree assault, and use of a handgun in the commission of a felony were levied against the respondent.[70] The prosecution offered some information contained in printouts from a profile page of a Myspace account held by a Jessica Barber, the respondent's girlfriend, to show that she had supposedly threatened one of the State's witnesses in a statement which read as follows: 'FREE BOOZY!!!![71] JUST REMEMBER SNITCHES GET STITCHES!! U KNOW WHO YOU ARE!!'[72]

The printout showed the name of the profile as 'Sistahsouljah' and also contained information of the life of the person like a birth date of 10/02/1983, residence at Port Deposit and her photo with the respondent.[73] Instead of using Barber to authenticate the printouts, the prosecution tried to utilise a specialist's testimony which affirmed that it was Barber's profile because of her photo with the respondent and her birth date highlighted on the profile.[74] The printouts, which were eventually admitted and earned Griffin the conviction, were objected to by the defence counsel arguing that the prosecution did not adequately show the relationship between the Myspace profile and Barber.[75]

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[69] *Griffin v State*, 19 A.3d 415 (Md. App. 2011).
[70] *Griffin v State*, 995 A.2d 791, 794 (Md. Ct. Spec. App. 2010).
[71] The nickname for the defendant.
[72] *Griffin v State*, 19 A.3d 415 (Md. App. 2011).
[73] Wendy Angus-Anderson "Authenticity and Admissibility of social media website printouts" http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1282&context=dltr last accessed on 24December 2021.
[74] Id.
[75] Id.

The Respondent appealed the decision on the ground that the printouts from the profile were not adequately authenticated and should not have been admitted into evidence.[76] The Court of Appeal pointed out that the potential for alteration of ESI on a social networking site was very high and that this affected the evaluation of the authenticity of printouts from such sites. The court in reaching its decision stated as follows:

> That an Email on its face purports to come from a certain person's Email address, that the respondent in an internet chat room dialogue purports to identify himself, or that a text message emanates from a cell phone number assigned to the purported author—none of these circumstances, without more, has typically been regarded as sufficient to support a finding of authenticity.[77]

The court maintained nonetheless that Rule 901 governed authentication, therefore, the consideration that a data message presented to the court which included the birth date, her city of residence, her nickname as well as the photograph of both barber and the respondent were not adequately distinctive to authenticate the printouts from the webpage.[78]

4.2 The Texas approach

This second approach is more flexible on the requirements for authentication of ESI and this is best illustrated by the case of *Tienda v State*.[79] Just as in the case of *Griffin v State,* the respondent in the trial court, Tienda, also filed an appeal against

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[76] Id.

[77] *Griffin v State*, 19 A.3d 415 (Md. 2011)). 124; Adrian Bellengère and Lee Swales "Can Facebook ever be a substitute for the real thing? A Review of *CMC Woodworking Machinery (Pty) Ltd v Pieter Odendaal Kitchens* 2012 (5) SA 604 (KZD) 2016 *Stell LR* 454 at 464 and at 641 to 642.

[78] Rule 901 of FRE states that circumstantial evidence such as appearance, contents, substance, internal patterns, location, or other distinctive characteristics can be offered as evidence that the article is what it claims to be.

[79] *Tienda v State*, 358 S.W.3d 633 (Tex. Crim. App. 2012).

the trial court's decision to admit printouts of information from a Myspace account alleged to have been owned by him (the respondent) into evidence.[80] The victim in the Tienda case was on a journey back home from a night outing when his vehicle out of the blue, was shot at from a number of cars on also on the same street as the respondent.[81] The court 'accepted information from multiple My space accounts that supposedly belonged to the respondent'.

Each of the Myspace accounts was connected to email addresses including his name or his moniker, 'had a profile name with the same attributes, showed his residence as the area, and had photos of a man who had the same facial features as him'. The Myspace profiles also had relevant posts such as 'You aint BLASTIN you aint Lastin' and 'EVERYONE WUZ BUSTIN AND THEY ONLY TOLD ON ME'.[82]

In affirming the decision of the trial court, the Court of Criminal Appeals contrasted the present case with the *Griffin* case, opining that there was a lot more corroborating information in this case than there were in the *Griffin* case.[83] The consideration of a host of corroborative information including photos, references to specific circumstances, and messages sent from the Myspace accounts bearing the appealing party's name taken together with the majority of his specific bio-data was held to be sufficient for the jury to reach the conclusion that he created and the Myspace profiles.[84]

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[80] *Griffin v State*, 19 A.3d 415 (Md. App. 2011).

[81] W Angus-Anderson "Authenticity and Admissibility of social media website printouts" http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1282&context=dltr last accessed on 24December 2021.

[82] Id.

[83] *Tienda v State*, 358 S.W.3d 633 at 647 (Tex. Crim. App. 2012).

[84] Wendy Angus-Anderson "Authenticity and Admissibility of social media website printouts".

5. The application of the Hearsay rules to ESI

Even if a piece of digital evidence has been found to be authentic, hearsay is still a barrier to the admissibility of ESI.[85] The rules of hearsay make inadmissible, statements offered to the court to prove the plausibility of their contents that are made out of court with the exception of statements that falls under one of the exceptions. For instance, witnesses are not allowed to give information in evidence of what is not within their personal knowledge but was revealed to them by another person in whatever form.[86] In the U.S. states, the barrier of hearsay is met once certain questions are looked into which include whether or not the information can be deemed as a statement and if that is the case, whether or not it is a statement by a person. A court will likewise conduct an evaluation on whether it is being offered as evidence to show the plausibility of its content, whether it meets the requirements of admissible hearsay by the FRE and if so, which of the exceptions if falls into[87] This is in line with Judge Grimm's position in *Lorraine v Markel* as follows:[88]

> Hearsay issues are pervasive when electronically stored and generated evidence is introduced. To properly analyze hearsay issues there are five separate questions that must be answered: (1) does the evidence constitute a statement, as defined by Rule 801(a); (2) was the statement made by a "declarant," as defined by Rule 801(b); (3) is the statement being offered to prove the truth of its contents, as provided by Rule 801(c); (4) is the statement excluded from the definition

[85]Mahmoud, R. F.& Bellengere, A. H 'A social service? A case for accomplishing substituted service via WhatsApp in South Africa.' (2020) 137(3) The South African Law Journal 371, 374-375.
[86]Lucy L Thomson "Admissibility of Electronic documentation as evidence in U. S. Courts" http://www.crl.edu/sites/default/files/d6/attachments/pages/Thomson-E-evidence-report.pdf last accessed on 10December 2021.
[87] Id.
[88]*Lorraine v Markel Am. Ins. Co.*, 241 F.R.D. 534 (D. Md. 2007).

> of hearsay by rule 801(1); and (5) if the statement is hearsay, is it covered by one of the exceptions identified at Rules 803, 804 or 807.[89]

The consequence of the foregoing is that if the proponent of ESI does not offer such evidence for the truth of its contents, or if the ESI falls in the category of logical relevance on a different circumstance, the rules of hearsay will not be applicable.[90]ESI can be offered for several purposes which include, for the truth of the matter asserted therein, to show knowledge, notice or intent, to show habit, motive or intent, to show exact numbers, patterns, probabilities or trends, to reveal a scheme or a plan and also to show mental state and attitude.[91] In all these instances the evidentiary value is in the existence of the ESI and doesn't depend on the truth of its contents.

Some courts have concluded that ESI that is wholly created by an application installed in an electronic device does not constitute hearsay.[92] In *United States v Lamons*[93] the court recognised that the ESI in question was 'the statements of machines' and therefore did not qualify to come under the consideration of hearsay.[94] Also in *United States v Washington*[95] the court held that 'Only a person may be a declarant and make a statement' and noted accordingly that 'nothing "said" by a machine [is] hearsay'.[96] This is not to say that electronic devices

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[89] Id.

[90]Lucy L Thomson "Admissibility of Electronic documentation as evidence in U. S. Courts" http://www.crl.edu/sites/default/files/d6/attachments/pages/Thomson-E-evidence-report.pdf last accessed on 10December 2021.

[91] Id.

[92] Jonathan L Moore "Time for an Upgrade: Amending the Federal Rules of Evidence to Address the Challenges of Electronically Stored Information in Civil Litigation" 50 *Jurimetrics J.* 147-193 (2010)

[93]*United States v Lamons*, 532 F.3d 1251, 1263-64 (11th Cir. 2008).

[94] Id.

[95]*United States v Washington*, 498 F.3d 225, 231 (4th Cir. 2007).

[96] Id.

cannot record hearsay but that data that has been wholly generated by an electronic device does not fall under the category of information to be considered under the hearsay rules.[97] For example, a piece of information on a header accompanying an electronic image, which a computer automatically generated was held not to be subject to the hearsay rules.[98]

Another example is where an electronic device creates data detailing the photographs of vehicles driving through red lights from a traffic camera, there is neither an author nor an assertion made as contained in the criteria required in the FRE and accordingly, the ESI created does not fall in the definition of hearsay evidence.[99] If the information is authenticated as evidence contained in a statement by one of the parties in the case and it is presented against the other party, the FRE does not include such information in the classifications of hearsay.[100] It is apparent consequently, that the U.S. courts still rely on their traditional rules of hearsay in analysing the admissibility of ESI with particular attention to the nature of the ESI.

6. The application of The Best Evidence Rule to ESI under the FRE in the USA

Another important evidentiary hurdle to be crossed is the rule requiring the production of the best possible evidence, which is primarily the original evidence. The rule, which is often referred to as the 'best evidence rule', does not refer to the

[97] Jonathan L Moore "Time for an Upgrade: Amending the Federal Rules of Evidence to Address the Challenges of Electronically Stored Information in Civil Litigation" 50 *Jurimetrics J.* 147-193 (2010).

[98] *United States v Hamilton*, 413 F.3d 1138, 1142-43 (10th Cir. 2005). Cited in Johnathan L Moore Id.

[99] G M Fenner, *The Hearsay Rule*(3rd ed.), at 12-13.

[100] G Michael Fenner "The admissibility of Web-based evidence" 47 *Creighton L. Rev.* 63 2013-2014.

qualitative value of the evidence[101] but rather requires that the original of a writing, recording, or photograph is what should be offered in proof of the genuine nature and content of the evidence.[102] The FRE defines original of a writing or recording as the composition or recording itself or any form of it which is capable of having a similar impact by the individual who composed or recorded it and, the original of a photo to incorporate the negatives or any print of such a photo.[103] If data is stored in an electronic device, any output device shown to reflect the data intelligibly and accurately is an original.[104] If such a device or printout does not reflect accurately the content of the data, it will not pass as the best possible evidence under the rule. For example, in the case of *United States v Jackson*[105]the court held that a reconstructed version of the accused's conversation was filled with mistakes and misprints. As a consequence, it could not be authenticated under the best evidence rule.[106]

In presenting ESI evidence in proof of its content, the best evidence will be the ESI itself and not circumstantial evidence of such ESI. For example, in the case of *United States v Levine*[107]when the state tried to show that the accused was dealing in pornography of minors online, a policeman who testified as a witness where he depicted what he has seen on the accused's electronic device, in lieu of the pornographic pictures themselves, was held to have run contrary to the best

[101] Id.
[102] Rule 1002 FRE.
[103] Rule 1003 FRE.
[104] Steven Goode "The Admissibility of electronic evidence" *The Review of litigation*. Vol 29. 1 2009-2010.
[105] 488 F. Supp. 2d 866, 870-71 (D. Neb. 2007).
[106] Steven Goode "The Admissibility of electronic evidence" *The Review of litigation*. Vol 29. 1 2009-2010.
[107] 546 F.2d 658, 667-68 (5th Cir. 1977).

evidence principle.[108] When, on the other hand, what is sought to be proved is the fact in issue in a case, the best evidence is one that proves the content of the ESI in relation to the matter itself. An example is the case of *United States v Bennett.*[109] In proving that the accused had illegally conveyed cannabis from Mexico, the prosecution provided proof that a GPS electronic device was found on the vessel of the accused and that it had a backtracking programme which saved data regarding the movement and location of the vessel on the day that the accused was apprehended.[110] The state's witness gave testimony to the effect that he examined the visual display of the data displaying the location on that day and extracted from it information that showed that the vessel had sailed to the US from Mexico.[111] The court decided that the testimony by the expert witness called by the state ran afoul of the best evidence principle on the grounds that the state was trying to prove the plausibility of the location data without actually producing the original data gotten from the GPS device.[112]

According to the best evidence rule, it is not only the original of ESI that is admissible. When such an original is not available then duplicates are admissible under certain circumstances.[113] Therefore, where the printout of information from an internet page precisely captures the information as contained on the page, and

[108] S Goode "The Admissibility of electronic evidence" *The Review of litigation.* Vol 29. 1 2009-2010.
[109] 363 F.3d 947 (9th Cir. 2004).
[110] Id.
[111] Id.
[112] Steven Goode "The Admissibility of electronic evidence".
[113] Rule 1003 FRE

no inappropriateness is claimed, the printout meets the prerequisites of the best evidence principle.[114]

Under the FRE, a copy of a piece of evidence may hold the same value as the original except if a question of the genuineness is brought up about the credibility of the evidence or where the conditions in which it was created might make it against the interest of justice to admit it.[115] The very transient nature of electronic evidence makes the need for duplicates even more important. Events like deletion and malfunctions as a result of routine electronic records management are common situations which make it necessary to resort to secondary evidence to prove the contents of such ESI.[116]

7. Legal Recognition of Electronically Stored Information under the Nigerian Evidence Law

The introduction of electronic evidence into the Nigerian procedural laws has been reactionary at best and this is primarily due to the overcautious and conservative approach to judicial reforms in the Country. As is the case with several common law countries, the traditional procedural rules of civil or criminal law are not dynamic enough to accommodate all of the electronically stored information and the need for clear and concise definitions of fundamental terms of electronic evidence is most glaring.[117] Nigeria only recently made provision for the

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[114] Kenneth N Rashbaum, Matthew F Knouff &Dominique Murray "Admissibility of Non-U.S. Electronic Evidence" XVIII *Rich. J. L. & Tech.* 9 (2012), http://jolt.richmond.edu/v18i3/article9.pdf.

[115] G Michael Fenner "The admissibility of Web-based evidence" 47 *Creighton L. Rev.* 63 2013-2014.

[116] Jonathan D Frieden & Leigh M Murray "The Admissibility of Electronic Evidence under the Federal Rules of Evidence" 17 *Rich. J.L. & Tech* 5 (2011).

[117] Chinwe .J., Admissibility of Documentary/ Electronic Evidence Issues, Challenges and Options, (Ibadan,

admissibility of computer-generated or electronic evidence in the Nigerian Evidence Act, 2011 (Act No. 18) 'NEA, 2011'.[118] The most noticeable improvement upon the previous Evidence Act was the legal recognition of a "*statement contained in a document produced by a computer*".[119]

The NEA, 2011 gave some much needed legal recognition for electronic evidence particularly on statements contained in a document produced electronically with or without human intervention.[120] The Act also broadly redefines 'document' to include film, tape, soundtrack as well as any device by means of which information is recorded, stored or retrievable with or without the aid of some other equipment.[121]

The NEA, 2011 states that for the purpose of a statement contained in a document produced by a computer, it shall be taken to have been produced by the said computer whether or not it was produced with or without any human intervention.[122]The act also states that information contained there from shall be taken to be supplied to a computer if it is supplied to it in any appropriate form whether it is supplied directly with or without human intervention by means of any appropriate equipment.[123] And where such information is supplied in the course of activities carried on by any individual or body with a view to its being stored or processed by a computer operated otherwise than in the course of those activities,

University Press, 2009), p. 15.

[118] Section 84 of the NEA, 2011

[119] ibid

[120] Section 84 of the NEA, 2011

[121] Section 258 (1) of the NEA, 2011

[122] Section 84 (5) (c) of the NEA, 2011

[123] Section 84 (5) (a) of the NEA, 2011

the information shall be taken to be supplied to it in the course of those activities.[124]

8. A comparison of the Nigerian Evidence Act to the FRE

The primary requirement for admissibility of evidence in Nigeria as with the United States' FRE is relevancy. The conditions for relevancy are set out in Parts II and III of the NEA, 2011.[125] The NEA also specifically set out requirements for the admissibility of statements in documents produced by computers. Such statements are admissible as evidence of the facts contained therein if it is shown that the document containing the statements was produced by a computer during a period over which it was used regularly to store or process information for the purposes of any activities regularly carried on over that period.[126] It must also be shown that 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 that the information contained in the statement reproduces or is derived from information supplied to the computer in the ordinary course of those activities.[127]

Like the FRE, the NEA, 2011 provides for the determination of what a computer is with regards to the admissibility of a statement in electronic form. The NEA, 2011 construes a computer to include combinations of computers used for the

[124] Section 84 (5) (b) of the NEA, 2011
[125] Relevancy of facts, statements, admissions and improperly obtained evidence Sections 4 to 36 NEA, 2011
[126] Section 84 (2) (a) of the NEA, 2011
[127] Section 84 (2) (c) and (d) of the NEA, 2011

production of such statements so far as the computers have been and are being regularly used to carry out such activities.[128]

The NEA, 2011 also requires that for such a statement to be admissible, it should be accompanied by a certificate attested to by a person responsible for the operation and management of the computer or any other relevant device.[129] The certificate shall detail the manner in which the document was produced or any other relevant particulars regarding the production of the document as well as his/her position in relation to the operation and management of the relevant device.[130]

It is pertinent to note that although the legislative intention behind Section 84 of the NEA, 2011 is to ensure that statement in documents produced electronically are *prima facie* reliable and represent accurately, what was fed into the computer, the process set out is rather overarching and overcautious. This was evident in *Akeredolu & Anor. Vs. Mimiko & Others* where the Court of Appeal, while affirming the decision of the trial tribunal, rejected vital electronic evidence for not meeting fully meeting all of the requirements as set out by the NEA, 2011.[131] The Court's justification read as follows:

> "Going by the foregoing provision it is discernible that the appellants who were desirous of demonstrating electronically the content of Exhibit P50A and P50B failed to lay the necessary foundation regarding the condition of the electronic gadget or computer they were going to use. To the extent that

[128] Section 84 (3) of the NEA, 2011
[129] Section 84 (4) of the NEA, 2011
[130] ibid
[131] Oluwarotimi O. Akeredolu & Anor. Vs. Dr. Rahman Olusegun Mimiko & Others. (2014) NWLR (PART 1388) 402

those conditions as spelt out in section 84 supra were unfulfilled, the demonstration ought not to be allowed"[132]

9. Conclusion

The primary aim of this research was the evaluation of the transformation of the conventional criteria for determining the admissibility and ascription value of ESI in the USA. The criteria that are considered include relevance, authenticity, reliability, rules of hearsay, best evidence rule and probative value ascription.[133] It is the determination of this research that there is a substantial recognition of ESI as distinct from paper-based evidence both in legislation and in judicial decisions. [134]There also appears to be an acknowledgement that conventional authentication criteria for paper-based documents might not always be effective when applied verbatim to electronic information.[135]

There remains, however, a substantial hindrance in the application of conventional rules of evidence to ESI, particularly as regards information created with little intervention by humans for the purpose of appropriately authenticating such evidence and ascribing value to it.[136]While the United States preserves many of the conventional rules of evidence in the FRE, it has shown a great deal of adaptation, especially in relation to electronically stored information. However, there are still disparities in the way courts in the United States evaluate electronic information, particularly as regards authentication as has been illustrated in the *Tienda* and

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[132] ibid

[133] Kenneth N Rashbaum, Matthew F Knouff &Dominique Murray "Admissibility of Non-U.S. Electronic Evidence" XVIII *Rich. J. L. & Tech.* 9 (2012), http://jolt.richmond.edu/v18i3/article9.pdf.

[134]*Lorraine v Markel Am. Ins. Co.*, 241 F.R.D. 534 (D. Md. 2007

[135] Id.

[136]D Collier "Evidently not so Simple" *The Quarterly Law Review for people in business* Vol 13(1) ISSN 1021-7061 2005.

Griffin cases.[137]Judge Grimm opined that this uncertainty is most apparent in the fact that there are very few judicial decisions on the application of rule 104 of the FRE which he considered to be the most relevant provision in this regard.[138]Another unique observation in the determination of admissibility and weight to be attached to electronic information Under the FRE is the hurdle put in place for the admissibility of hearsay evidence. There are a number of questions that need to be satisfied in this regard. Can the evidence be deemed to be a statement made by a declarant? If so, is it being offered to prove the plausibility of its content? Another hurdle is determining whether the information being produced falls within the definition of hearsay or if it is protected as one of the exceptions of hearsay?[139] The FRE also recognises that electronic information can be offered for several purposes which include the plausibility of its contents, to prove intention or knowledge, to show patterns, habits, and trends and even to show an attitude or a certain mental capacity.[140] It is concluded that this will be most helpful in improving the rules regulating electronic evidence as such definitions allow the drafters take into consideration the various types of electronic information that can be created and define the respective rules appropriately.

This work is based on research supported by the South African International Maritime Institute (SAIMI)

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[138]Paul W Grimm, Lisa Yurwit Bergstrom, Melissa, M O'Toole-Loureiro. "Authentication of Social Media Evidence" *American Journal of Trial Advocacy* Vol. 36:433, 2013.
[139]Lucy L Thomson "Admissibility of Electronic documentation as evidence in U. S. Courts" http://www.crl.edu/sites/default/files/d6/attachments/pages/Thomson-E-evidence-report.pdf last accessed on 10 December 2021.
[140] Id.