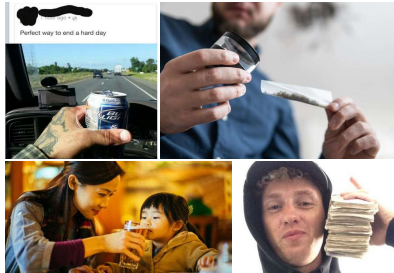


Admissibility of Digital Evidence

Jeff Welty
UNC School of Government
February 2024

1

Digital Evidence Can Be Powerful



2

... and Confusing

What Is Spoofing? How to Protect Yourself Against It

June 8, 2022
by Sagar Joshi

What are deepfakes - and how can you spot them?

All generated fake videos are becoming more common (and convincing). Here's why we should be worried
by Ian Sample

IPV4 Address Format (Dotted Decimal Notation)

123.89.46.72

1 Byte=8 Bits 4 Bytes =32 Bits

3

Don't Be This Guy*

- "I don't know if there has been, um, what would need to be done to trace this [social media post] back to a particular IP address or whatever at this time."
 - State v. Ford, 245 N.C. App. 510 (2016)

* Stock photo, not the actual guy.



4




Electronic Communications Are the Key Concern

- Everything is digital now
- But in most cases, the traditional foundation rules work well
- Communications present some special issues

5

Is This Text Message Admissible?

- Dad and Mom break up
- He realizes he's missing \$1000 that he had set aside to pay for a medical procedure that Child needs
- Via text message, Dad accuses Mom of stealing it
- She replies, "I'm sorry, I will make it right, I took it a few months ago so I could buy you the recliner I got you for your birthday"
- He takes a screenshot of the exchange
- At a subsequent TPR proceeding, he testifies:
 - The screenshot accurately depicts the exchange
 - He received the reply from her number, which she has used for years
 - She did buy him a recliner for his most recent birthday



6

State v. Allen, 250 N.C. App. 823 (2016) (unpublished)

- D charged with felony larceny of \$18K in cash from her boyfriend’s parents
- The boyfriend suspected her and confronted her via text message
- She responded “I’m sorry. I’m so sorry. I will make this right if it takes me 100 years.”
- She referenced a gift she had given to the boyfriend
- The boyfriend forwarded the messages to a LEO, who printed them out without altering them
- The State introduced the messages through the boyfriend, who testified that he knew the messages were from D because they were from her phone number, no one else ever uses her phone, and she referenced the gift she gave him

7

State v. Allen, 250 N.C. App. 823 (2016) (unpublished)

- Is there a **hearsay** problem?
 - No – the messages are statements of a party opponent, Rule 801(d)
- Is there a **best evidence rule** problem?
 - No – printouts are originals under Rule 1001
- Is there an **authentication** problem?
 - No – the boyfriend is a “witness with knowledge,” Rule 901(b)(1), and the fact that the messages came from D’s phone number was a distinctive characteristic, Rule 901(b)(4)
 - There is no need to call a witness from the cell phone company to attribute the messages to D

8

Authentication Basics


- Authentication is identification
 - The proponent must show that “the [evidence] in question is what its proponent claims.” N.C. R. Evid. 901
- Authentication is “a special aspect of relevancy”
 - Adv. Comm. Note, N.C. R. Evid. 901(a)
- Authentication is a low hurdle
 - State v. Ford, 245 N.C. App. 510 (2016) (stating that the “burden to authenticate . . . is not high – only a prima facie showing is required”)
- Authentication often comes from:
 - Testimony of a “[w]itness with [k]nowledge,” Rule 901(b)(1)
 - The “distinctive characteristics” of the evidence or other “circumstances,” Rule 901(b)(4).



9

Authenticating Electronic Communications

- “[T]he authentication of social media evidence in particular presents some special challenges because of the great ease with which a social media account may be falsified or a legitimate account may be accessed by an imposter.”
- *United States v. Browne*, 834 F.3d 403 (3d Cir. 2016)



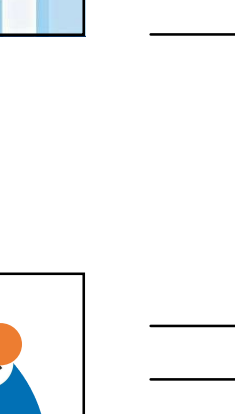
10

Two Step Authentication

- (1) Does the exhibit (screen capture, photo, video) accurately reflect the communication?
- (2) Is there reason to believe that the purported author actually wrote the communication?

“To authenticate [social media] evidence . . . there must be circumstantial or direct evidence sufficient to conclude a screenshot accurately represents the content on the website it is claimed to come from and to conclude the written statement was made by who is claimed to have written it.”

- *State v. Clemons*, 274 N.C. App. 401 (2020).



11

State v. Clemons, 274 N.C. App. 401 (2020)

- V has a DVPO against D
- D is released from prison and their adult daughter picks him up
- Shortly thereafter:
 - V begins receiving multiple calls daily from an unknown number; the caller sometimes leaves messages referencing events from D and V’s past
 - Comments appear on some of V’s Facebook posts; they are made from V’s daughter’s account, but V testifies that her daughter never comments on her posts and wouldn’t make comments of that kind
- V takes screenshots of the Facebook comments and gives them to the police, who charge D with violating the DVPO by contacting V

12

State v. Clemons, 274 N.C. App. 401 (2020)

- (1) “the screenshots must have accurately reflected [V’s] Facebook page. . . . Therefore, the screenshots must have been authenticated as photographs.”
- (2) “the screenshots of the Facebook comments are also statements—the State wanted the jury to use the screenshots to conclude [D] communicated with [V] in violation of the DVPO through the Facebook comments. . . . In light of this purpose, the Facebook comments also needed to be authenticated by evidence sufficient to support finding they were communications actually made by Defendant.”

13

Circumstantial Evidence of Authorship

State v. Ford, 245 N.C. App. 510 (2016)

- D’s dog DMX killed a neighbor
- D charged: involuntary manslaughter
- Did D know DMX was dangerous?
- State introduced a screenshot of what it said was D’s MySpace page, featuring a video titled “DMX the Killer Pit”
- Authentic? Yes. Account name included D’s nickname and account contained pictures of D and DMX



14


State v. Gray, 234 N.C. App. 197 (2014)

- Two men, including D, and two women planned to rob V
- The women met up with V and his friend at a trailer
- The women communicated with D and the other man via text messages about who was in the trailer and what was happening
- After D was arrested, a LEO searched D’s phone and found the text chain, and took a screenshot
- At trial, the LEO testified about what he did and one of the women said that the screenshot showed the communication she had with D that night


15

What If the Evidence Comes from a Technology Company?

- United States v. Recio, 884 F.3d 230 (4th Cir. 2018)
- D charged with unlawful gun possession
- Prosecution offered a Facebook post quoting a rap lyric about always carrying a gun
- Authentic?
- 4th Circuit:
 - Step one (accuracy): Facebook (the custodian) certified the posting as a business record
 - Step two (authorship): username and email address associated with the account contained D's name and the account contained photos of D and birthday wishes to D




16



What If the Communication Is a Photo or a Video?

- United States v. Farrad, 895 F.3d 859 (6th Cir. 2018)
- D charged with being a felon in possession of a firearm
- Prosecution's sole evidence was photos taken from D's Facebook
- D: no evidence they're accurate, could be Photoshopped, don't even know when they were supposedly taken
- 6th Circuit: "not only did the details of the account match [D] . . . but . . . the photos appeared to show [D], his tattoos, and . . . distinctive features of [his] apartment . . . the photos were not . . . offered as definitive and irrefutable proof. . . . No specific evidence was shown to suggest that the photographs were not [accurate]. . . . In short, while there were still questions about the photos that merited probing, those questions were not so glaring as to prevent the photos from clearing the relatively lower hurdle of authentication."

17



Questions

18

Admissibility of Digital Evidence

Jeff Welty
UNC School of Government
February 2024
