

## Digital Evidence

Foundation and Admission of Digital Evidence

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## Topics

- Foundations for Digital Evidence
- Admission of Digital Evidence
- Challenges to Digital Evidence
- Examples of Digital Evidence

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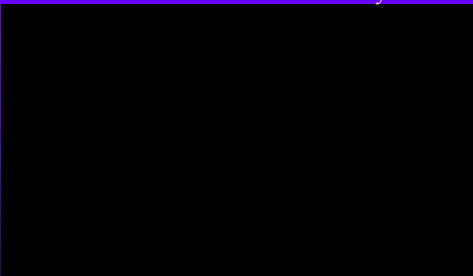
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## Digital Evidence

It does not have to be scary!



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## Digital Evidence

- Examples:
  - Photographs, Video, Models
  - Maps, Drawings, Animations, Diagrams
  - Text Messages, Facebook Posts, and other electronic media

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## Digital Evidence is Persuasive

- “a picture is worth a thousand words”  
Frederick R. Barnard (1921)
- We live in a visual society.
  - 98% of population have at least one television
  - Average person watches 25-30 hours a week
- CSI Effect
  - Jurors expect to see exhibits, scientific evidence, and visuals
- Memory Retention and Persuasion
  - People learn faster, understand more, and retain more when they *see* and *hear* information at the same time.
  - Psychologically, studies have shown that presentations with visual aids were 43% more persuasive than ones that did not have visual aids.

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## Digital Evidence

- Trial Visuals are very important because they:
  - Inform the jury about the facts of the case
  - Clarify evidence that might otherwise be difficult to describe
  - Memorable because they are seen and heard, and many times taken with jurors to deliberations
  - Persuasive because they continue to be “your” witness even after the trial is complete and deliberations have begun.

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## Foundation

- Other Considerations:
  - Using Digital Evidence:
    - Looping: (Can get important parts of story more than once)
      - Have witness describe event, then use a visual to describe it again
  - Mark exhibit with relevant locations
    - Mark and write on exhibit by witness: "saw Jimmy point gun" written on exhibit to show where this occurred.
  - Goes to jury and continues to persuade for you!

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## Digital Evidence is Persuasive

It Must be TRUE!




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## Foundation

- Foundation:
  - The requirement that the evidence to be admitted has been satisfactorily proven to be relevant (URE 401), fulfills any other requirement set forth in the Rules of Evidence (i.e., hearsay), and there has been enough information to "*support a finding that that the item is what the proponent claims it is.*" U.R.E. 901(a).

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### URE, Rule 901

- Rule 901(b) *Illustration*. (not exhaustive)
  - Testimony of witness with knowledge
  - Nonexpert opinion on handwriting
  - Comparison by expert witness
  - Distinctive characteristics and the like
  - Voice identification
  - Telephone conversations
  - Public records or reports
  - Ancient documents or data compilation
  - Process or system
  - Methods provided by statute or rule

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### URE, Rule 902

- Self Authentication: extrinsic evidence not required in the following circumstances:
  - Domestic public documents under seal
  - Domestic public documents not under seal
  - Certified copies of public records
  - Official publications
  - Newspapers and periodicals
  - Acknowledged documents
  - Certified domestic records of regularly conducted activity

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### Foundation

- Foundational Requirements (generally)
  - Evidence is “relevant”
  - Evidence is a “fair and accurate depiction” of something at the relevant time the witness is testifying about (authentication)
    - See U.R.E. 901(b)(1) *Testimony by a Witness with Knowledge*: “testimony that a matter is what it is claimed to be”
  - Preponderance of the Evidence Standard

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## Foundation

- Other Considerations:
  - Other Rules of Evidence to Consider:
    - Article I: General Provisions
      - Remainder of related writings or recorded statements
    - Article VI: Witnesses
      - Lack of personal knowledge
      - Impeachment: character, crimes, prior statements
    - Article VIII: Hearsay
      - Out of court statement offered in court to prove the truth of the matter asserted.
      - Non-hearsay and Exceptions
    - Article X: Contents of Writings, Recordings, and Photographs
      - Requirements of original
      - Admissibility of duplicates
      - Lost or destroyed documents

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## Digital Evidence Challenges

- Challenges to Foundation
  - Witness is not capable of testifying it's "fair and accurate" (U.R.E. 602 and 702)
    - Witness lacks personal knowledge
    - Knowledge required is that of an expert, which the witness is not qualified
- Alteration: potential that evidence has been changed or altered from original condition
  - Example: photograph has been cropped, recording that has been altered, email forged, etc.

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## Digital Evidence Challenges

- Rule 403 Based Challenges:
  - "probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury. . . ."
- Examples:
  - Gruesome or Dramatic Photographs/Video
  - Evidence is objectively inaccurate (misleading)
    - Lighting, Distances, Dimensions (ex., fisheye lens)
    - Distorts perception

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## Text Messages

- State v. Otkovic (322 P.3d 746)(Utah Ct. App. 2014)
  - Text Messages: Defendant sent text messages admitting to robbing the victim to a third party named Shields. Defendant was trying to make sure Shields did not tell victim who he was.
  - Foundation: “proponent must produce evidence sufficient to support a finding that the item is what the proponent claims it is.”
  - May use circumstantial evidence to prove:
    - Requires more than mere confirmation that the number or address belonged to a particular person
    - Requires circumstantial evidence to “corroborate the identity of the sender”
    - Contradiction by Defendant will go to weight of evidence

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## Email Messages

- Witness with Knowledge: Recipient of message that can testify that it was accurate printout of the received message and came from address recognized as sender.
- Other Circumstances Demonstrate Identity:
  - (1) name identifies source, (2) personal knowledge to sender demonstrated in message, (3) access at relevant time, (4) subsequent communications confirm details of message, (5) tracing email through servers to senders computer, etc.
- Beware: chain messages = multiple levels of hearsay

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## Facebook Messages

- People v. Glover: 2015 WL 795690 (Co. App. 2015)
  - Facebook Messages: Printouts from Facebook records where Defendant stated he wanted victim dead and he was “green” lit.
    - Foundation/Authentication: Affidavit from Facebook records custodian certifying the requirements of the business records exception; and
    - Hearsay: (must connect to Defendant) additional evidence to support authorship was required.

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## Other Digital Media

- State v. Burke, 256 P.3d 1102 (Utah App. 2011)
  - Mother came home and examined her computer and determined certain pornographic website were accessed using her computer. She copied them to a document and provided them the police.
- Internet Browser “Cookies”
  - Authenticate: testimony by a person with knowledge. (mother knew about computers)
  - Identity: mother testified that Defendant had access to computer in her home during the relevant time period. Thus the potential pool of suspects was very small.

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## Photographs

- Photographs:
  - Foundational Questions
    - Did you have the opportunity to see the (insert location/object/etc.) at the time of the (insert event)?
    - Do you remember how it looked that day?
    - Showing you exhibit number 1, do you recognize what it is?
    - What do you recognize it as?
      - Do you know when this picture was taken? When was it taken?
      - Do you know who took this picture? Who took the picture?
      - Do you know how that person took this picture? How was the picture taken?
      - Have you seen this picture before?

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## Photographs

- Photographs:
  - Foundational Questions
    - Would it be helpful to you to use this exhibit when explaining your testimony?
    - Does it fairly and accurately show the (insert location) at the time of the (insert event)?
    - Your Honor, the State moves to admit Exhibit 2 into evidence.
    - May we publish Exhibit 2 to the jury?

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## Video Recordings

- Videos:
  - Foundational Questions
    - Same as for photographs, except add:
    - Have you viewed this video before coming to court today?
    - Does it fairly and accurately show....

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## Video Recordings

- The “Silent Witness”
  - What if no one was there to witness the picture/video when it captured the relevant images?
    - Example: store security video captures a nighttime burglary
  - Utah Rule of Evidence 901(b)(9)  
Authentication/Identification Requirements
    - *Process or System:* Evidence describing a process or system used to produce a result and showing that the process or system produces an accurate result

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## Video Recordings

- The “Silent Witness”
  - Witness: Manager or Store Security Person (someone familiar with security system)
  - Questions:
    - Foundational questions about witness (position, duties, access to security system, experience with system, how long had system, etc.)
    - Describe security system
      - Motion sensor? Timer? Continuous?
      - Cameras, where information stored,
      - Tamperproof? Access?

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## Video Recordings

- The “Silent Witness”
  - Questions:
    - Was the system working properly on July 15, 2013 at 2:14 A.M.?
    - Have you observed the system record events previous to this one? How often do you check for proper operation?
    - Has it done so accurately?
    - Does it track the date? Time? Is it accurate?
    - Did the system capture the events occurring in your store on July 15, 2013?

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## Video Recordings

- The “Silent Witness”
  - Questions:
    - Showing you Exhibit 4, do you recognize this item?
    - What do you recognize it as?
    - How do you know that this is the video from your security camera? (shows something unique about store (URE Rule 901(b)(4))
    - Have you seen this video before today?
    - Did it fairly and accurately capture the events that happened on July 15, 2013 at and around 2:14 A.M.?
    - Has this video been altered from the original footage that you observed when the video was originally viewed?
    - MOVE TO ADMIT, PUBLISH TO JURY

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## Sound Recordings

- Sound Recordings:
  - Examples: Telephone recordings, face-to-face (wired witness), etc.
  - Foundation:
    - Competent Witness with firsthand knowledge (usually one person in the conversation) testifies it:
      - Fairly and accurately recorded the conversation;
      - Identify voices on recording (at least relevant ones); AND
      - No alteration or tampering.
    - See URE 901(b)(6): *Telephone conversations*: requires that (1) call made to number assigned to person; and (2) if person, self identification or other circumstances showing person was the one called.

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## Diagrams, Maps, and Drawings

- Diagrams, Models, Maps, and Drawings
  - Foundation:
    - Foundation witness that has personal knowledge of how the real thing looked at the relevant time;
    - Witness can state the exhibit “fairly and accurately” represents the real thing; AND
    - Witness can state the exhibit would “help” explain what happened.
  - Tips for their use
    - Make sure the witness is familiar with the exhibit BEFORE trial
    - Avoid having the witness draw on the spot in court
      - Avoid questioning the witness while drawing
    - Difficult to admit the Court’s marker board

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## Examples of Digital Evidence

- Computer Animations/Simulations:
  - May be visual creation of expert opinion of events
  - May be visual creation of witness’s statements
- Foundation:
  - *Expert Testimony* required (see Rule 702), to prove qualified, relevant and reliable, helpful to jury, and accurately applied to facts of the case.
  - *Expert* will testify about how visual was created, how its accuracy was maintained, and how the animation “fairly and accurately” illustrates opinion.
- Cautionary Jury Instruction: jury should not consider the animation as a re-creation of actual event, but only opinion of expert if not based upon witness statements.
- Simulations: if based upon witness’s statement, then must use have expert testify that data used was reliable, that the simulation program is capable of fairly and accurately using data to produce and accurate result, witness should verify too.

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## Rico Perea (Aerial View)

AUGUST 5, 2007  
AROUND 12 MIDNIGHT

AERIAL VIEW

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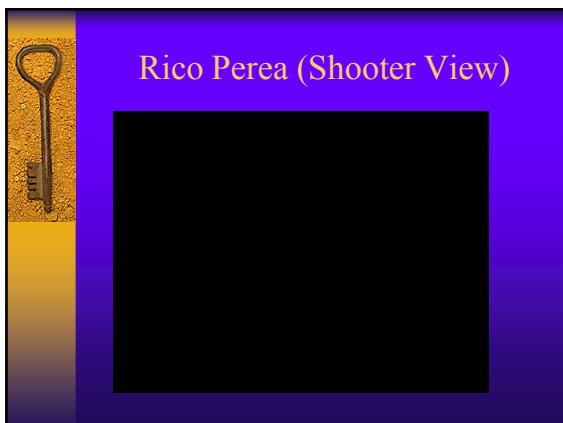
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## Rico Perea (Shooter View)

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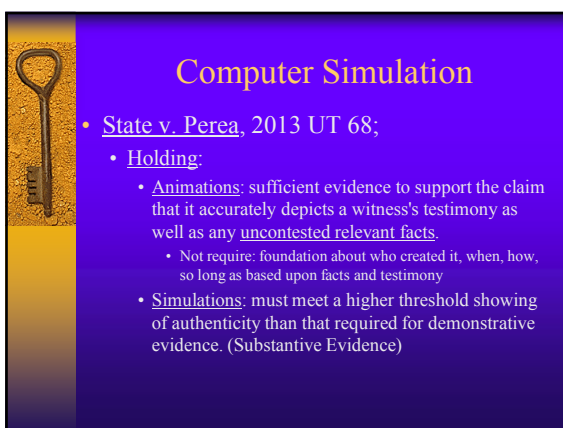
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## Computer Simulation

- State v. Perea, 2013 UT 68;
- Holding:
  - Animations: sufficient evidence to support the claim that it accurately depicts a witness's testimony as well as any uncontested relevant facts.
    - Not require: foundation about who created it, when, how, so long as based upon facts and testimony
  - Simulations: must meet a higher threshold showing of authenticity than that required for demonstrative evidence. (Substantive Evidence)

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## Recorded Reenactments

- Recorded Reenactments:
  - Almost unavoidable in testimony on some level
    - Example:
      - Q: How did he hit you?
      - A: He punched me in the face with his right hand like this.
  - Foundation:
    - Demonstration is relevant
    - Would not endanger or create undue sympathy (R. 403)
      - Accurate and Similar to original conditions and circumstances of original event.
  - Avoid using the Defendant! (See O.J. Simpson).

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## Reenactments



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## An Example of Digital Evidence

State v. Matthew Stewart (2012)

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## State v. Matthew Stewart



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Exhibit 14

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Exhibit 15

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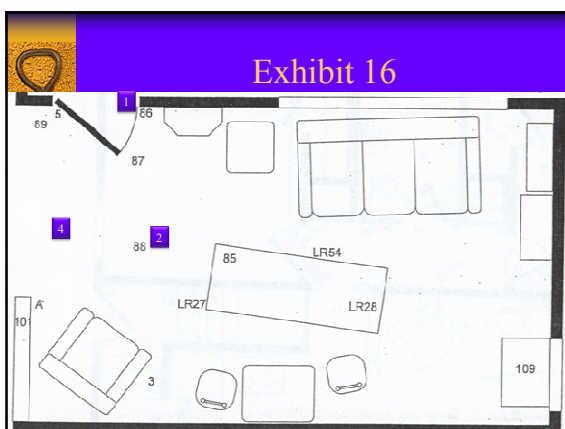


Exhibit 16

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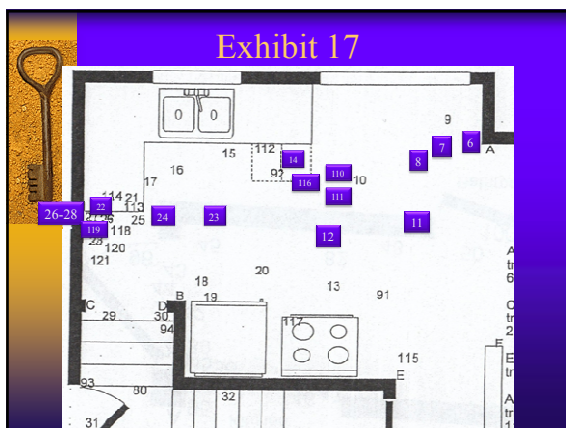
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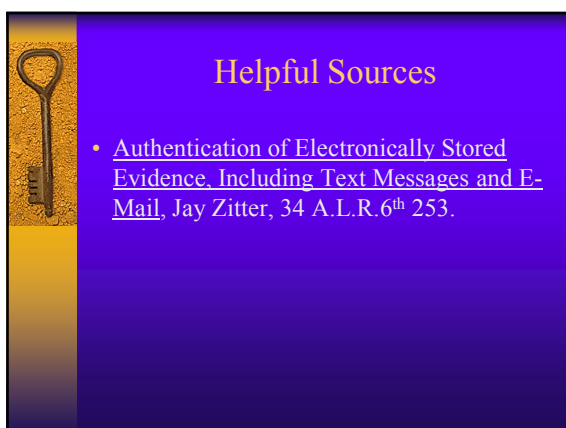
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