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“CONNECTED” DISCOVERY: WHAT THE UBIQUITY OF DIGITAL EVIDENCE MEANS FOR LAWYERS AND LITIGATION

Gail Gottehrer

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I. INTRODUCTION

[1] More than ten years ago, the *Zubulake* case¹ raised awareness of the importance of digital evidence in litigation. At that time, for many lawyers, the discovery process consisted of collecting paper documents, manually reviewing those paper documents, and responding to document requests by producing paper documents. Digital evidence existed, but was more limited in scope and volume than it is today. Back then it was often overlooked or not recognized as a potential source of valuable evidence to be obtained in discovery.

[2] In the post-*Zubulake* era, the ways in which companies and individuals create and maintain information have changed dramatically. Many types of documents that were traditionally created on paper and stored in hard-copy now *never* exist on paper. Instead, they are created on computers or other digital devices and stored in e-mail archives, on backup tapes, or in the cloud. Business and personal communications that once took place via letters and faxes are now transmitted through e-mails and text messages. Microsoft Excel files replaced handwritten accounting

¹ See *Zubulake v. UBS Warburg*, 220 F.R.D. 212, 214 (S.D.N.Y. 2003) (stating “Electronic evidence only complicates matters. As documents are increasingly maintained electronically, it has become easier to delete or tamper with evidence (both intentionally and inadvertently) and more difficult for litigants to craft policies that ensure all relevant documents are preserved. This opinion addresses both the scope of a litigant’s duty to preserve electronic documents and the consequences of a failure to preserve documents that fall within the scope of that duty.”).

ledgers. Medical records are routinely created and stored electronically, making the paper medical file a thing of the past. Carbon copy secretarial message books with tear-away message slips are replaced by programs that transcribe voicemail messages and deliver them to the recipient by e-mail. Designs are created and maintained in CAD files rather than drawn on paper. Many businesses advertise primarily, if not exclusively, on social media and the Internet and little, if at all, through paper mailings. Employees traded in paper calendars and address books for electronic schedulers, using programs and applications that reside on their computers and mobile phones.

[3] The prevalence of digital information, and the corresponding decline in the use of paper for the creation and storage of information, profoundly affected litigation, including discovery and trials. The “documents” and information that are requested and produced in discovery are overwhelmingly electronic documents and data. Electronically created and stored information is being used in depositions, to support motions, and at hearings and trials. Given the ways in which technology transforms how people communicate and do business, the “smoking gun” in a case—to the extent one exists—is more likely to be an e-mail, text message or social media post than a tangible document. Knowing how potential sources of digital evidence are created and stored, how to obtain that data in discovery, and how to maximize the value of that information during depositions and at trial are now critical components of the practice of law.

[4] Digital evidence is so significant in discovery and litigation that it should be acknowledged as being much more than a subset of discovery, often referred to as “e-Discovery.” Existing and emerging technologies provide digital evidence that can shape the outcome of a case or investigation. Digital evidence from a wide range of technologies finds its way into civil and criminal litigation in the United States and other countries, with dramatic results. Digital evidence is poised to take on an even greater role in litigation as the Internet of Things continues to grow,²

² See *Internet of Things: Privacy and Security in a Connected World* FED. TRADE COMM’N (2015), <https://www.ftc.gov/system/files/documents/reports/federal-trade->

autonomous vehicles become commonplace,³ industrial business operations incorporate drones,⁴ and blockchain revolutionizes banking.⁵

[5] This article discusses some of the reported cases in which digital evidence was the subject of motion practice, was introduced at trial, and was a determining factor in a case. It is not an exhaustive look at all the cases that have been affected by digital evidence, or all the kinds of technology that generate data relevant to legal proceedings. A review of the cases in this article, however, is sufficient to dispel any doubt about the importance of digital evidence and to confirm the magnitude of its impact on the practice of law.

commission-staff-report-november-2013-workshop-entitled-internet-things-privacy/150127iotrpt.pdf, archived at <https://perma.cc/44WA-JH2N>.

³ See *The Driverless Cars Are Coming Sooner than You Think*, CLASSIFIEDLEAKS, (Oct. 27, 2015, 8:04 AM), <http://classifiedleaks.com/driverless-cars-are-coming-sooner-you-think>, archived at <https://perma.cc/2G36-95AX>; see also Catherine Clifford, *There Will Be 20 Million Self-Driving Cars on the Road by 2025*, ENTREPRENEUR (Dec. 2, 2015), <http://www.entrepreneur.com/article/253468>, archived at <https://perma.cc/7L4C-6Z8P>.

⁴ See Tim Devaney, *Eight Industries that Want to Fly Drones*, THE HILL (Oct. 25, 2014, 2:43 PM), <http://thehill.com/regulation/221788-eight-industries-that-want-to-fly-drones>, archived at <https://perma.cc/PYG5-YWMD>; see also Megan Crouse, *Which Industry Uses Drones Most?* MANUFACTURING (July 31, 2014, 9:57 AM), <http://www.manufacturing.net/news/2015/07/which-industry-uses-drones-most>, archived at <https://perma.cc/3M2R-PA9F>; Sally French, *Drone Delivery Is Already Here — And It Works*, MARKETWATCH (Dec. 15, 2015, 7:32 AM), <http://www.marketwatch.com/story/drone-delivery-is-already-here-and-it-works-2015-11-30>, archived at <https://perma.cc/TH98-ZPH8>.

⁵ See Jack Bowling & Steve Quinlivan, *Bitcoin Blockchain Technology to Revolutionize Financial Services*, STARTRIBUNE (Jan. 10, 2016, 2:00 PM), <http://www.startribune.com/bitcoin-blockchain-technology-to-revolutionize-financial-services/364706851/>, archived at <http://perma.cc/R8GG-TBWM>; see also Dion Hinchcliffe, *How Blockchain Is Likely to Transform IT and Business*, ZDNET (July 31, 2015), <http://www.zdnet.com/article/how-blockchain-is-likely-to-change-it-and-business-forever/>, archived at <https://perma.cc/9DKA-C799>.

II. CONNECTED DEVICES

A. Telematics Devices

[6] Telematics devices are wireless devices, typically installed in personal vehicles or fleet vehicles. They collect data on how the vehicle is being operated, if the vehicle crashes or an airbag is deployed, and when maintenance is needed.⁶ These devices transmit that data from the vehicle to an entity, such as an insurance company or a fleet owner, in real time.⁷

[7] Telematics data led to the criminal conviction of a driver in the United Kingdom who was involved in a hit and run accident that resulted in the death of a pedestrian in 2014.⁸ Police experts analyzed data from the telematics device Omar Tariq was driving at the time of the accident, which showed that he was speeding—driving more than 20 miles over the posted speed limit.⁹ Confronted with that evidence, Tariq pled guilty to causing a death by dangerous driving and was sentenced to more than three years in prison.¹⁰

[8] In the United States, data from a Progressive Insurance telematics device helped a Cleveland, Ohio father persuade a jury that he was not

⁶ See *What is Telematics*, FLEETMATICS, <https://www.fleetmatics.com/what-is-telematics>, archived at (last visited Mar. 18, 2016); see also Brian Hughes, *Why Telematics (Think: Driverless Cars) Is the Future*, ENTREPRENEUR (Dec. 18, 2015), <http://www.entrepreneur.com/article/252578>, archived at <https://perma.cc/5WZ5-2C2J>.

⁷ See *Telematics*, GARTNER, <http://www.gartner.com/it-glossary/telematics>, archived at <https://perma.cc/3A3Z-XRUZ> (last visited Mar. 18, 2016).

⁸ See *Telematics Data Helps Jail Courtesy Car Driver for Hit and Run Collision*, FLEETNEWS (Jan. 26, 2016), <http://www.fleetnews.co.uk/news/fleet-industry-news/2016/01/26/telematics-data-helps-jail-courtesy-car-driver-for-hit-and-run-collision>, archived at <https://perma.cc/THN5-SVKM>.

⁹ See *id.*

¹⁰ See *id.*

guilty of murder.¹¹ Michael Beard was accused of suffocating his infant daughter on May 8, 2011 at 4:45 a.m., after he finished his shift working as a nursing aide.¹² Counsel introduced data from the Snapshot telematics device in his car at trial, and showed that Beard had turned the car off in front of the child's house "at 4:44 a.m. and turned it back on three minutes later."¹³ After deliberating for an hour, the jury found that Beard was not guilty of the crime.¹⁴

[9] Important leads in another criminal matter came from data from the UConnect telematics system in a stolen Jeep Renegade.¹⁵ That evidence, in combination with footage from a Nest home security camera in the Jeep owner's house, led to an arrest and assisted police in identifying the other thieves.¹⁶ When a group of teenagers broke into the house of a Baltimore man, their faces were caught on the Nest camera in

¹¹See Donna J. Miller, *With Help from Snapshot Insurance Device, Parma Heights Man Is Cleared of Murdering His 7-Month-Old Daughter*, CLEVELAND.COM (July 2, 2013, 3:30 PM), http://www.cleveland.com/metro/index.ssf/2013/07/with_help_from_snapshot_insura.html, archived at <http://perma.cc/8FSE-Y34E>.

¹² See *id.*

¹³ See *id.*

¹⁴ See *id.*

¹⁵ UConnect is a multimedia infotainment system in Chrysler vehicles that integrates with smartphones, has navigation functionality and gives drivers access to physical controls that adjust features from climate control to music preferences. See Lindsay Martell, *What Is Chrysler UConnect?*, AUTOTRADER (Oct. 2013), <http://www.autotrader.com/car-tech/what-is-chrysler-uconnect-215353>, archived at <https://perma.cc/J287-CYWM>.

¹⁶ See Sean Gallagher, *Opsec Fail: Baltimore Teen Car Thieves Paired Phones with Jeep UConnect*, ARSTECHNICA (Feb. 11, 2016, 11:44 AM), http://arstechnica.com/security/2016/02/opsec-fail-baltimore-teen-car-thieves-paired-phones-with-jeep-uconnect/?mc_cid=db1e887d36&mc_eid=664f313ded, archived at <https://perma.cc/TU63-3LUG>.

the house, which led to the arrest of one of the thieves.¹⁷ He refused to identify his accomplices, who also stole the homeowner's Jeep.¹⁸ When the homeowner got his Jeep back, he noticed three new device names on the Jeep's UConnect system paired device list.¹⁹ The homeowner matched one of the device names to an Instagram account of a teenager who appeared to match one of the individuals seen on the Nest footage.²⁰ The homeowner also noticed that one of the names on the Instagram account's contacts matched one of the phones on the list on the UConnect System.²¹ This digital evidence gave Baltimore police several leads in the case.²²

[10] On the civil side, data from a telematics device enabled a driver in the United Kingdom to successfully challenge a speeding charge by contradicting the evidence that allegedly supported it.²³ Police charged Neil Herron with driving 10 miles over the posted speed limit.²⁴ Herron insisted that he had not been speeding.²⁵ At the time of the alleged speeding incident, Herron had been conducting a trial of a telematics

¹⁷ *See id.*

¹⁸ *See id.*

¹⁹ *See id.*

²⁰ *See id.*

²¹ *See* Gallagher, *supra* note 16.

²² *See id.*

²³ *See Telematics Successfully Used to Overturn Speeding Prosecution*, FLEETNEWS (Feb. 10, 2015), <http://www.fleetnews.co.uk/news/manufacture-news/2015/10/01/telematics-successfully-used-to-overturn-speeding-prosecution>, archived at <https://perma.cc/38XF-5NKS>.

²⁴ *See id.*

²⁵ *See id.*

device in his car.²⁶ The data from that device enabled Herron to prove that the car had been traveling far below the speed limit, as he had claimed.²⁷

B. GPS Navigation Systems

[11] Data from a GPS device²⁸ introduced in a criminal non-jury trial led to the conviction of a New Jersey man for second degree murder for intentionally running over a twelve year old girl.²⁹ Prosecutors alleged that George Ford killed the girl to prevent her from reporting what had happened to her when he was alone with her in the hours before her death.³⁰ Ford contended that he had hit the girl by accident after showing her horses he had in a pasture near Binghamton.³¹ The critical evidence came from a GPS device that Ford's estranged wife placed in his vehicle when she suspected he was having an affair.³² When she provided the GPS

²⁶ *See id.*

²⁷ *See Driver Wins Speeding Case Through Telematics*, THE DRIVING INSTRUCTOR LEICESTER (Oct. 5, 2015), <http://www.the-driving-instructor-leicester.co.uk/Blog/uncategorized/driver-wins-speeding-case-through-telematics/>, archived at <https://perma.cc/YFW8-YKM9>; *see also supra* note 23.

²⁸ *See What Is GPS?*, GARMIN, <http://www8.garmin.com/aboutGPS/index.html>, archived at <https://perma.cc/PE47-QS93> (stating Global Positioning System (GPS) devices use a “satellite-based navigation system made up of a network of [twenty-four] satellites placed into orbit by the U.S. Department of Defense,” and made available for private use. The satellites transmit signal information to GPS receivers that use the data to determine a vehicle’s location and display it on an electronic map on the device) (last visited Feb. 23, 2016).

²⁹ *See People v. Ford*, 935 N.Y.S. 2d 368, 368–69 (NY App. Div. 2011); *see also* Carly Rothman, *N.Y. Judge Convicts Piscataway Man of Killing Baby Sitter*, NJ.COM (Feb. 19, 2009, 7:08 PM), http://www.nj.com/news/index.ssf/2009/02/ny_judge_convicts_piscataway_m.html, archived at <https://perma.cc/T29R-GVDF>.

³⁰ *See id.*

³¹ *See id.*

³² *See id.*

device to the police, the data from the device showed that Ford had not been at the pasture and had spent the hours before the girl's death behind an abandoned farmhouse half a mile from where she was killed.³³

[12] Similarly, in *State v. Jackson*, data from a GPS device installed by police proved to be key evidence leading to the conviction of defendant William Jackson for the murder of his daughter.³⁴ Jackson told police that his daughter had been kidnapped on her way to school.³⁵ After a search of Jackson's house and truck failed to yield any evidence, police obtained a warrant and put a GPS tracking device in his truck.³⁶ Data from the GPS device led police to a storage unit, an empty grave near a logging road and a new grave where the girl was buried.³⁷ Based largely on the GPS data connecting Jackson to the body and its burial and reburial sites, the court convicted Jackson of murder and sentenced him to fifty-five years in prison.³⁸ The conviction was affirmed by the Washington Supreme Court.³⁹

[13] Ironically, in the case of a Wisconsin man, the evidence used to convict him of stalking his former girlfriend was the data from the GPS device he himself had used to commit the crime.⁴⁰ Paul Seidler previously

³³ *See id.*

³⁴ *See State v. Jackson*, 46 P.3d 257, 260 (Wash. Ct. App. 2002); *see also* David A. Schumann, *Tracking Evidence with GPS Technology*, WISCONSIN LAWYER (May 2004), <http://www.wisbar.org/newspublications/wisconsinlawyer/pages/article.aspx?Volume=77&Issue=5&ArticleID=810>, *archived at* <https://perma.cc/D5PZ-4G8N>.

³⁵ *See id.*

³⁶ *See id.*

³⁷ *See id.*

³⁸ *See id.*

³⁹ *See Schumann, supra* note 34.

⁴⁰ *See id.*

installed a GPS tracking device on his ex-girlfriend's car that tracked the car's location and reported it to him by cellphone or computer through the Internet.⁴¹ Seidler used the data to follow his ex-girlfriend.⁴² Prosecutors used the data to support their case against him, describing the GPS device as "the best witness."⁴³

[14] GPS data is also used as evidence in civil cases, such as the wrongful termination action brought by a cable company employee against his former employer, Pacific Bell Telephone Company.⁴⁴ Pacific Bell terminated Blake Smith's employment after an investigation into the theft of his work truck led the company to conclude that Smith had failed to safeguard company property and that he had lied during the investigation into the theft.⁴⁵ Smith claimed he parked the truck, took the keys out of the ignition, and locked the truck.⁴⁶ A significant factor in Pacific Bell's determination that Smith was lying was the data obtained from the GPS technology in the truck, which revealed that the truck was idling when it was stolen.⁴⁷ In an affidavit filed in support of its motion for summary judgment, Pacific Bell explained that the GPS technology in its trucks generates a report in a Microsoft Excel spreadsheet that records various data, including the time and location of every vehicle, each time the ignition is turned on or off, the time and location of the vehicle every seven seconds, and the time and location of the vehicle every one mile it is

⁴¹ *See id.*

⁴² *See id.*

⁴³ *Id.*

⁴⁴ *See Smith v. Pac. Bell Tel. Co.*, 649 F.Supp.2d 1073, 1076 (E.D. Ca. 2009).

⁴⁵ *See id.* at 1079–80.

⁴⁶ *See id.* at 1078.

⁴⁷ *See id.* at 1079–80.

driven.⁴⁸ The Court ultimately granted Pacific Bell's motion for summary judgment.⁴⁹

C. Wearables⁵⁰

[15] Digital evidence from wearable fitness trackers will play a role in a pending criminal case in Pennsylvania and a pending civil case in Canada. In West Chester, Pennsylvania, police arrested defendant Jeannine Risley when data from her Fitbit showed she lied to police when she reported she

⁴⁸ See *id.* at 1078.

⁴⁹ See *Smith v. Pac. Bell Tel. Co.*, 649 F.Supp.2d 1073, 1101–02 (E.D. Ca. 2009).

⁵⁰ Wearable devices contain smart sensors and wirelessly connect to smartphones through a web connection. These devices collect and track data about the person who wears them, such as activity level, heart rate, calories burned and sleep patterns. They can also be used to make payments at stores and to alert the wearer about incoming calls and e-mails. Popular types of wearables include fitness trackers, smartwatches, smart glasses, smart clothing and smart jewelry. See Dan Sung, *What Is Wearable Tech? Everything You Need to Know Explained*, WAREABLE (Aug. 3, 2015), <http://www.wearable.com/wearable-tech/what-is-wearable-tech-753>, archived at <https://perma.cc/FW2P-NKJY>; see also *The Wear, Why and How*, THE ECONOMIST (Mar. 14, 2015), <http://www.economist.com/news/business/21646225-smartwatches-and-other-wearable-devices-become-mainstream-products-will-take-more>, archived at <https://perma.cc/8W62-JWAS>. Experts have predicted that by 2019, 173.4 million wearable devices will have been shipped worldwide. See *Fueled by Growing Demand for Smart Wearables, IDC Forecasts Worldwide Wearable Shipments to Reach 173.4 Million by 2019*, IDC (Sep. 14, 2015), <http://www.idc.com/getdoc.jsp?containerId=prUS25903815>, archived at <https://perma.cc/W4NQ-UTMU>; see also Dinah Wisenberg Brin, *As Wearables Become More Popular, What Is HR's Responsibility?*, SOCIETY FOR HUMAN RESOURCE MANAGEMENT (Feb. 16, 2016), [http://www.shrm.org/hrdisciplines/technology/articles/pages/as-wearables-become-more-popular-what-is-hrs-responsibility.aspx?utm_source=SHRM%20HR%20Technology%20_%20PublishThis%20\(17\)&utm_medium=email&utm_content=February%2016,%202016&MID=01516098&LN=Gottelher&spMailingID=24737172&spUserID=ODM1OTI3NDQzOTgS1&spJobID=742677018&spReportId=NzQyNjc3MDE4S0#sthash.kFaSjKe3.dpuf](http://www.shrm.org/hrdisciplines/technology/articles/pages/as-wearables-become-more-popular-what-is-hrs-responsibility.aspx?utm_source=SHRM%20HR%20Technology%20_%20PublishThis%20(17)&utm_medium=email&utm_content=February%2016,%202016&MID=01516098&LN=Gottelher&spMailingID=24737172&spUserID=ODM1OTI3NDQzOTgS1&spJobID=742677018&spReportId=NzQyNjc3MDE4S0#sthash.kFaSjKe3.dpuf), archived at <https://perma.cc/K69G-GT27>.

was assaulted.⁵¹ Risley told the police officers responding to her 911 call that she was sleeping until around midnight, when she awoke to find a man on top of her.⁵² She alleged that the man assaulted and raped her.⁵³ An examination of data from the Fitbit she wore that night, however, contradicted her claims.⁵⁴ The Fitbit data showed that Risley was awake and walking around at the time she claimed she was sleeping and ultimately assaulted.⁵⁵ Risley now faces trial on three misdemeanor counts including knowingly filing a false police report.⁵⁶

[16] On the civil side, a Canadian law firm is planning to use Fitbit data as evidence in a personal injury case to prove the effect that a car accident had on their client.⁵⁷ The accident victim, injured years before Fitbits were available, was a personal trainer and led an active lifestyle before the

⁵¹ A Fitbit is a fitness tracker that allows the wearer to monitor things such as the number of steps taken, distance covered and calories burned. Some versions include an altimeter, which keeps track of the amount of stairs climbed and some include sleep tracking. The Fitbit syncs to the wearer's Fitbit account through a computer or mobile device and enables the wearer to view the activity data collected by the wearable device. *See* Robert J. Nelson, *Everything You Need to Know About Fitbit*, iMORE (Jun. 12, 2014, 8:24 AM), <http://www.imore.com/everything-you-need-know-about-fitbit>, archived at <https://perma.cc/UD9A-GUD8>; *see also* Brett Hambright, *Woman Staged 'Rape' Scene with Knife, Vodka, Called 9-1-1, Police Say*, LANCASTERONLINE.COM (Jun. 19, 2015), http://lancasteronline.com/news/local/woman-staged-rape-scene-with-knife-vodka-called--/article_9295bdbe-167c-11e5-b6eb-07d1288cc937.html, archived at <https://perma.cc/4WQD-9EHZ>.

⁵² *See* Hambright, *supra* note 51.

⁵³ *See id.*

⁵⁴ *See id.*

⁵⁵ *See id.*

⁵⁶ *See id.*

⁵⁷ *See* Parmy Olson, *Fitbit Data Now Being Used in the Courtroom*, FORBES (Nov. 16, 2014, 4:10PM), <http://www.forbes.com/sites/parmyolson/2014/11/16/fitbit-data-courtroom-personal-injury-claim/#67483e2a209f>, archived at <https://perma.cc/JAX9-G8UW>.

accident.⁵⁸ To support the plaintiff's claim that her activity level is impaired by the accident, her lawyers intend to run data from the Fitbit she currently wears through an analytics platform which uses publicly available research to compare a person's activity data with that of the general population.⁵⁹ Her lawyers expect the data to show that their client's activity levels are now below average for a woman of her age and profession, as a result of the injuries she sustained in the accident.⁶⁰

D. Dashboard Cameras and Red Light Traffic Cameras

[17] Data from dashboard video cameras and government operated traffic cameras is effective in both civil and criminal cases. Evidence from an onboard video camera, in addition to cell phone records, led to an Alabama jury awarding nearly \$1.3 million to a driver who was severely injured in a crash caused by a truck driver who was distracted by a work-related phone call at the time of the accident.⁶¹ At trial, the jury saw video footage from a camera that was in the school bus with which Michael Duey collided.⁶² Additional digital evidence from cell phone records from the truck driver Gregory Moore, whose negligence caused the collision, showed Moore was on a business call at the time of the accident.⁶³ Based

⁵⁸ *See id.*

⁵⁹ *See id.*

⁶⁰ *See id.*

⁶¹ *See Video: Distracted Driving Lawsuit Draws \$1.3M Award*, AUTOMOTIVE FLEET (Feb. 8, 2016), http://www.automotive-fleet.com/channel/safety-accident-management/news/story/2016/02/video-distracted-driving-lawsuit-draws-1-3m-award.aspx?utm_campaign=topnews-20160212&utm_source=Email&utm_medium=Enewsletter, archived at <https://perma.cc/J3QG-KXLQ>.

⁶² *See id.*

⁶³ *See id.*

on this data, the jury found Moore and his employer liable for the damages incurred by Duey.⁶⁴

[18] In a criminal case in California, the court convicted Carmen Goldsmith of failing to stop at a red light in an intersection, based on photos and video generated by a red light traffic camera system.⁶⁵ At trial, a police investigator testified that this computer based digital camera system records events that occur in an intersection after the traffic light turns red, and stores the information on the hard disc of a computer at the scene.⁶⁶ Technicians retrieve the data during the day via an Internet connection.⁶⁷ The system records and produces three photos and a twelve-second video.⁶⁸ The photos show the vehicle approaching the intersection before the violation, then the vehicle within the intersection turning right or going through the intersection, and finally the vehicle's license plate.⁶⁹ The system puts a data bar on all three photos showing the date, time, location and amount of time the traffic light was red at the time of the photo.⁷⁰ In this case, the video shows the vehicle approaching the intersection and moving through it.⁷¹ The Appellate Division of the Superior Court, the Court of Appeals, and the California Supreme Court all affirmed Goldsmith's conviction. In response to Goldsmith's claim that the camera evidence was not adequately authenticated, the Supreme Court explained that it frequently approved the "substantive use of photographs

⁶⁴ *See id.*

⁶⁵ *See People v. Goldsmith*, 203 Cal. App. 4th 1515, 1518 (Cal. App. 2d Dist. 2012).

⁶⁶ *See People v. Goldsmith*, 59 Cal. 4th 258, 264 (Cal. 2014).

⁶⁷ *See id.*

⁶⁸ *See id.*

⁶⁹ *See id.* at 264-65.

⁷⁰ *See id.* at 265.

⁷¹ *See People v. Goldsmith*, 59 Cal. 4th 258, 265 (2014).

as essentially a ‘silent witness’ to the content of the photographs,” because to “hold otherwise would illogically limit the use of a device whose memory is without question more accurate and reliable than that of a human witness.”⁷²

E. Event Data Recorders

[19] Data from event data recorders, also known as black boxes, proves to be important evidence in criminal cases. In *Commonwealth v. Zimmerman*, the Massachusetts Appellate Court held that the trial judge properly admitted evidence taken from the event data recorder (EDR⁷³) in the defendant’s car, which contributed to her conviction for motor vehicle homicide.⁷⁴ Michelle Zimmerman lost control of her SUV and it spun, sliding off the road, hitting a tree, and resulting in the death of the passenger in the front seat of her vehicle.⁷⁵ At the time of the accident, road conditions were poor, with both rain and snow.⁷⁶ The police accident investigator found there was probable cause to believe that “evidence of this crime would be found in the EDR.”⁷⁷ While Zimmerman claimed she was driving between 20 and 30 miles per hour, the data from the EDR in

⁷² *Id.* at 267.

⁷³ An Event Data Recorder (EDR), also known as a “black box,” is a device that is built into a vehicle’s airbag control module and records certain information from a vehicle immediately before and/or during most crashes. The data from the event data recorder’s memory can be downloaded to provide information about what happened to the vehicle, the deployment of airbags and seat belt tensioners, as well as data about the engine speed and vehicle speed prior to the crash. See *Event Data Recorders*, INSURANCE INSTITUTE FOR HIGHWAY SAFETY (Apr. 2015), <http://www.iihs.org/iihs/topics/t/event-data-recorders/qanda>, archived at <https://perma.cc/UMLM9-58YJ> (last visited Feb. 18 2016).

⁷⁴ See *Commonwealth v. Zimmerman*, 873 N.E.2d 1215, 1218 (2007).

⁷⁵ See *id.* at 1217.

⁷⁶ See *id.*

⁷⁷ See *id.*

her vehicle showed that five seconds before the accident, she was driving at 58 miles per hour.⁷⁸ Zimmerman was charged with and convicted of operating her vehicle at a rate of speed that was not reasonable or prudent and criminally negligent operation of a vehicle.⁷⁹

[20] In *Matos v. State*, the Florida District Court of Appeal affirmed the conviction of Edwin Matos on two counts of vehicular manslaughter where the key issue in the case—the speed at which Matos had been driving—was established by the prosecution through data from an EDR.⁸⁰ Matos collided with another vehicle, killing two teenage girls.⁸¹ Data from the EDR in Matos’s car showed he was driving at a 114 miles per hour (in a 30 mile per hour zone) four seconds before the crash, and 103 miles per hour within one second after the crash.⁸² The defense’s expert estimated the car’s speed at only 56.91 miles per hour.⁸³ Data from the EDR helped the court to convict Matos.⁸⁴

[21] Similarly, in *People v. Hopkins*, data from the air bag module in the defendant’s car helped prosecutors establish “a prima facie case of depraved indifference murder” and defeat the defendant’s motion to dismiss the indictment.⁸⁵ The air bag module data showed that at the time of impact, the defendant’s vehicle was going between 65 and 70 miles per hour; that five seconds before impact, the defendant’s car was travelling at

⁷⁸ *See id.* at 1216, 1219.

⁷⁹ *See Commonwealth v. Zimmerman*, 873 N.E.2d 1215, 1217 (2007).

⁸⁰ *See Matos v. State*, 899 So. 2d 403, 405 (Fla. Dist. Ct. App. 2005).

⁸¹ *See id.* at 405.

⁸² *See id.*

⁸³ *See id.*

⁸⁴ *See id.*

⁸⁵ *People v. Hopkins*, No. 2004-0338, 2004 N.Y. Misc. LEXIS 2902, at *17.

104 miles per hour; and that three to four seconds before impact, the vehicle was going 106 miles per hour.⁸⁶ The posted speed limit in the area was 30 miles per hour.⁸⁷ The data further showed that the defendant did not apply the brakes until two and a half to three second before he crashed into the line of cars stopped at a red light.⁸⁸

F. E-Z Pass Transponders

[22] The E-Z Pass system, implemented in toll plazas in sixteen states, collects data used by both prosecutors and defendants in states like New Jersey. In *S.S.S. v. M.A.G.*, a New Jersey appellate court reversed the lower court's entry of a final restraining order in a domestic violence case and remanded the case for a new trial due to the improper exclusion of E-Z Pass evidence.⁸⁹ In this case, a woman alleged her former boyfriend picked her up at her school at Rutgers-Newark at 9 A.M., assaulted her at a Jersey City motel at 9:30 A.M., and returned her to her school at 10 A.M.⁹⁰ The defendant denied this and claimed that nothing had happened.⁹¹ In addition to a letter from his employer stating he had been at work from 8:35 A.M. until 5 P.M., he also offered data from E-Z Pass transponder records, showing that he crossed the Bayonne Bridge in to Brooklyn at 8:16 A.M. that day.⁹² The defendant argued that he could not have crossed the bridge into Brooklyn at 8:16 A.M., gotten to work at 8:35

⁸⁶ *See id.* at *9.

⁸⁷ *See id.*

⁸⁸ *See id.*

⁸⁹ *See S.S.S. v. M.A.G.*, No. A-1623-09T2, 2010 N.J. Super. Unpub. LEXIS 2479, at *1 (N.J. Super. Ct. App. Div. 2010).

⁹⁰ *See id.* at *3.

⁹¹ *See id.* at *4.

⁹² *See id.*

A.M., and been in Newark at 9 A.M.⁹³ The appellate court found that in this he-said-she-said dispute, where no witnesses could be called or exhibits introduced, the E-Z Pass transponder evidence was critical to the defense and its exclusion on hearsay grounds was improper.⁹⁴

[23] In *State v. McGuire*, the prosecutor introduced E-Z Pass transponder data against Melanie McGuire, a New Jersey woman accused of killing her husband, cutting up his body, and disposing of it in suitcases in Virginia.⁹⁵ The prosecution introduced the evidence to support the allegation that she traveled from her home to Atlantic City in order to create false evidence showing that her husband was still alive and in the Atlantic City area.⁹⁶ McGuire had called E-Z Pass customer service trying to get them to remove two forty-five cent charges showing her traveling near Atlantic City, which she claimed were incorrect.⁹⁷ The prosecution also introduced E-Z Pass evidence from the vehicles of McGuire and her parents.⁹⁸ This data, in combination with the state's case, suggested that on May 3, McGuire picked up her kids from day care, dropped them off with her parents, and then returned to her house to get the suitcases containing her husband's body and travel to Delaware and Virginia to dump them.⁹⁹

III. SOCIAL NETWORKING SITES

[24] Not only does the widespread use of social networking sites create new ways for individuals and businesses to communicate, but it also

⁹³ See *id.* at *4–5.

⁹⁴ See S.S.S., 2010 N.J. Super. Unpub. LEXIS 2479, at *8–10.

⁹⁵ See *State v. McGuire*, 16 A.3d 411, 419, 426 (N.J. Super. Ct. App. Div. 2011).

⁹⁶ See *id.* at 426.

⁹⁷ See *id.*

⁹⁸ See *id.* at 427.

⁹⁹ See *id.*

creates a treasure trove of relevant data for civil and criminal litigation. For example, in *Reid v. Ingerman Smith LLP*, Reid sued her employer and Mary Anne Sadowski for damages resulting from alleged sexual harassment by Sadowski.¹⁰⁰ Defendants sought production of postings and photographs from private portions of Reid's Facebook account, arguing that since postings and photographs on the public portions of her account contradicted her claims in the lawsuit, the private portions may also contain relevant information.¹⁰¹ After reviewing the public postings, the Court found them to be probative evidence of Reid's mental and emotional state, and concluded that her private postings may also contain relevant information that reflected her emotional state.¹⁰² The Court also found that postings by third parties about Reid's social activities were discoverable, as they could be relevant to her claims of emotional distress and loss of enjoyment of life, and could reveal the names of potential witnesses in the case.¹⁰³ Reid was ordered to produce social media postings and photographs that "reveal[ed], refer[ed], or relate[d] to any emotion, feeling or mental state... [and] relate[d] to events that could be reasonably expected to produce a significant emotion, feeling or mental state," including posts made by third parties that contain their observations of Reid and Reid's responses to those posts.¹⁰⁴

¹⁰⁰ See *Reid v. Ingerman Smith LLP*, No. CV-2012-0307(ILG)(MDG), 2012 U.S. Dist. LEXIS 182439, at *1 (E.D.N.Y. Dec. 27, 2012).

¹⁰¹ See *id.* at *3.

¹⁰² See *id.* at *3-4.

¹⁰³ See *id.* at *7.

¹⁰⁴ See *id.* at *7, 9. Using the same relevance analysis, another court similarly required the plaintiff in a race discrimination action to produce her online social media communications, including "profiles, postings, messages, status updates, wall comments, causes joined, groups joined, activity streams, applications, blog entries, photographs, or media clips, as well as third-party communications that put the plaintiff's communications in context." See *Robinson v. Jones Lang LaSalle Americas, Inc.*, No. 3:12-cv-00127-PK, 2012 U.S. Dist. LEXIS 123883, at *5-6 (D. Or. Aug. 29, 2012); see also *Bass v. Miss Porter's School*, No. 3:08cv1807(JBA), 2009 U.S. Dist. LEXIS 99916, at *1, *3-4 (D. Conn. Oct. 27, 2009) (finding that the defendant was entitled to receive

[25] Similarly, in *Romano v. Steelcase, Inc.*, the court required the plaintiff to provide the defendant with access to her Facebook and MySpace pages and accounts, as they were deemed to contain information relevant to her damages claims and to the extent of her alleged injury, including her claim for loss of enjoyment of life.¹⁰⁵ The plaintiff alleged that she was permanently injured as a result of the accident and could not participate in certain activities due to her injuries.¹⁰⁶ The defendant argued that information on the public pages of plaintiff's Facebook and MySpace pages showed her to have an active lifestyle, and that one account contained a photo of the plaintiff smiling outside her home—even though she claimed that she was bedridden and confined to her house as a result of her injuries.¹⁰⁷ The contradictions between the information on the public portions of these social media sites and plaintiff's claims in her lawsuit led the Court to find it was reasonably likely that the private portions of those sites may contain additional information relating to her activities and enjoyment of life, which were relevant and material to the defense of the case.¹⁰⁸

[26] In *Held v. Ferrellgas, Inc.*, a recent employment discrimination and retaliation case, the Court found that data from the online job search engines that the plaintiff had used were relevant and had to be produced.¹⁰⁹ Defendants argued that any job searches conducted during

information from the Facebook account of the plaintiff, relating to her allegation that she was teased and taunted on Facebook and through text messages, because "Facebook usage depicts a snapshot of the user's relationships and state of mind at the time of the content's posting" and was therefore relevant to issues of liability and damages in the case)

¹⁰⁵ See *Romano v. Steelcase, Inc.*, 907 N.Y.S.2d 650, 651 (2010).

¹⁰⁶ See *id.* at 653.

¹⁰⁷ See *id.* at 654.

¹⁰⁸ See *id.*

¹⁰⁹ See *Held v. Ferrellgas, Inc.*, No. 10-2393-EFM, 2011 U.S. Dist. LEXIS 120980, at *1 (D. Kan. Aug. 31, 2011).

the course of plaintiff's employment related to his commitment to his job, his perspective on the working environment at the company, and any emotional distress he allegedly suffered.¹¹⁰ Searches conducted after his employment ended, defendants contended, related to plaintiff's alleged emotional distress, actual damages and attempts to mitigate his alleged damages.¹¹¹ The court ultimately agreed with the defendants.¹¹²

[27] Being equally probative in criminal matters, postings and communications on Facebook played a role in the conviction of several men on terrorism conspiracy charges in *U.S. v. Hassan*.¹¹³ The prosecution used the defendants' Facebook postings and communications to demonstrate their violent tendencies and commitment to terrorism.¹¹⁴ At trial, the prosecution's evidence included messages posted by one defendant on Facebook promoting his radical Jihadist beliefs; another defendant's postings on Facebook and other social media sites that demonstrated his belief in violent jihad and his willingness to further violent causes; and information showing that the second defendant had asked someone to delete the postings that related to his violent ideology.¹¹⁵ The defendants were convicted of conspiracy to provide material support to terrorists and other charges.¹¹⁶ Their convictions were affirmed by the Fourth Circuit Court of Appeals.¹¹⁷

¹¹⁰ *See id.*, at *2.

¹¹¹ *See id.*

¹¹² *See id.*, at *3.

¹¹³ *See United States v. Hassan*, 742 F.3d 104, 117 (4th Cir. 2014).

¹¹⁴ *See id.*

¹¹⁵ *See id.* at 147.

¹¹⁶ *See id.* at 141.

¹¹⁷ *See id.* at 151.

IV. Text Messages and Tweets

[28] Digital evidence played a central role in the criminal trial of Dharun Ravi, a Rutgers college student charged with witness tampering, invasion of privacy, and bias intimidation arising from his activation of a webcam to watch his roommate's date with a man in their dorm room.¹¹⁸ The evidence of Ravi's witness tampering included a series of text messages he sent to fellow Rutgers student Molly Wei while police interviewed her.¹¹⁹ Those texts showed that Ravi tried to influence what Wei told the police about their spying on his roommate.¹²⁰ In one text message, Ravi wrote: "Did you tell them we did it on purpose? What did you tell them when they asked why we turned it on? I said we were just messing around with the camera."¹²¹ After the trial, where Ravi was convicted of witness tampering, one juror stated that Ravi's texts convinced her that he had tampered with a witness.¹²²

[29] Texts and tweets were also important evidence introduced at trial in connection with the invasion of privacy and bias intimidation charges.¹²³ In a Tweet from Ravi to another student, he wrote: "Roommate

¹¹⁸ See Collen Curry, *Rutgers Trial: Dharun Ravi Sent Texts to Witness During Police Investigation*, ABC NEWS (Feb. 27, 2012), <http://abcnews.go.com/US/rutgers-trial-dharun-ravi-texts-witness-police-investigation/story?id=15800869>, archived at <https://perma.cc/GE6J-XBKT>.

¹¹⁹ *See id.*

¹²⁰ *See id.*

¹²¹ *Id.*

¹²² See David M. Halbfinger & Beth Kormanik, *Rutgers Case Jurors Call Digital Evidence Crucial*, N.Y. TIMES (Mar. 16, 2010), http://www.nytimes.com/2012/03/17/nyregion/jurors-say-digital-evidence-convinced-them-of-dharun-ravis-guilt.html?_r=0, archived at <https://perma.cc/5G4U-E74U>.

¹²³ *See id.*

asked for the room. I went to Molly's room and turned on my webcam I saw him making out with a dude. Yay."¹²⁴ In another Tweet, Ravi invited others to view video of his roommate during another date with the same man, saying "[a]nyone with iChat I dare you to video chat me between hours of 9:30 and 12. Yes it's happening again."¹²⁵ In an attempt to persuade the jury that he was not biased against gay people, Ravi's attorney introduced a text Ravi sent to his roommate where Ravi wrote "I've known you were gay and I have no problem with it. In fact one of my closest friends is gay and I have a very open relationship."¹²⁶ The jury found Ravi guilty on those charges as well.¹²⁷

V. Blogs and Chat Rooms

[30] Litigants also rely on blog entries and chat room transcripts to support their claims in civil cases. Portions of a blog were among the evidence a father used to support his motion for a new trial in a divorce case, after a Louisiana trial court awarded domiciliary custody of his minor son to his ex-wife.¹²⁸ The father unsuccessfully relied on pages of his ex-wife's blog to argue that she may have had a relationship with another man during the couple's separation, despite having denied that she was in a relationship during the trial.¹²⁹ He further argued that his ex-

¹²⁴ Jamil Smith, *I Saw Him Making Out with a Dude. Yay.*, MSNBC (Sept. 30, 2010, 12:10 PM), <http://www.msnbc.com/rachel-maddow-show/i-saw-him-making-out-dude-yay>, archived at <https://perma.cc/Q4E4-Y58B>.

¹²⁵ *Tyler Clementi: Rutgers Suicide*, CBSNEWS, <http://www.cbsnews.com/pictures/tyler-clementi-rutgers-suicide/19/>, archived at <https://perma.cc/HR36-RJRR> (last visited Feb. 25, 2016).

¹²⁶ Amy Davidson, *The Tyler Clementi Verdict*, THE NEW YORKER (Mar. 16, 2012), <http://www.newyorker.com/news/amy-davidson/the-tyler-clementi-verdict>, archived at <https://perma.cc/3YSQ-954S>.

¹²⁷ *See id.*

¹²⁸ *See Steinebach v. Steinebach*, 957 So.2d 291, 299 (Ct. of App. La. 2007).

¹²⁹ *See id.*

wife's blog entries showed she spent an excessive amount of time on the Internet rather than taking care of her child, and that she hated his parents because she accused them of cyberstalking her by reading her blogs.¹³⁰ The trial judge stated that while the Internet statements were evidence that could have been used to impeach the ex-wife's credibility during the divorce proceeding, the statements occurred after the trial and were not made under oath, and therefore, did not provide the basis for a new trial.¹³¹ The Court also noted that, more generally, it was not clear that the statements would be evidence that was important to the case.¹³² The appellate court affirmed the trial court's order.¹³³

[31] Conversely, other courts have found chat room transcripts to be relevant evidence. In *Glazer v. Fireman's Fund Insurance Company*, the plaintiff was ordered to produce copies of all her chats from LivePerson, a website offering online advice and professional consulting services, including sessions with online psychics.¹³⁴ Glazer chatted with the online psychics on numerous occasions, and e-mailed portions of some of those online chats to her work e-mail account.¹³⁵ When she sued Fireman's Fund for allegedly retaliating against her after "she complained about discrimination against non-African Americans and [ultimately terminating] her because of her religion," Fireman's Fund reviewed the excerpts of the chats and sought to obtain the transcripts of all chats in discovery.¹³⁶ Based on a review of the excerpts, the Court agreed with Fireman's Fund that all the chats appeared to be relevant to one or more

¹³⁰ *See id.*

¹³¹ *See id.*

¹³² *See id.* at 300.

¹³³ *See Steinebach*, 957 So.2d at 300.

¹³⁴ *See Glazer v. Fireman's Fund Ins. Co.*, No. 11 Civ. 4374 (PGG) (FM), 2012 U.S. Dist. LEXIS 51658, at *1-4 (S.D.N.Y. Apr. 4, 2012).

¹³⁵ *See id.* at *2.

¹³⁶ *See id.* at *1-2.

issues in the case—such as Glazer’s work performance, her relationships with her co-workers, her opinions about how she was treated during her employment at the company, her emotional state before, during, and after her employment, the steps she took to mitigate her damages, and her personal beliefs about African Americans—and allowed them to be discoverable.¹³⁷

VI. E-MAILS

[32] While there is a myriad of other digital evidence sought in building cases, perhaps the most frequently sought and used form of digital evidence is e-mail. In *Arroyo v. Volvo Group North America, LLC*, a military service discrimination and disability discrimination case, e-mail evidence led to the reversal of an order granting summary judgment to Volvo.¹³⁸ The Court found that e-mails sent between Volvo employees could lead a reasonable jury to conclude that Volvo had anti-military animus against Arroyo, and discriminated against her because she had post-traumatic stress disorder.¹³⁹ The Seventh Circuit Court of Appeals found that the District Court underestimated the “strength of the emails as support for Arroyo’s case.”¹⁴⁰

[33] In those e-mails, Volvo supervisors expressed frustration with Arroyo’s taking time off from work for military service, writing “are we required to give her the day before and day after for travel?” and “I find myself with a dilemma if I were to discipline a person for taking too much

¹³⁷ See *id.* at *2–3. Instant messages (“IMs”) have been introduced at trial and have been found to be sufficient evidence to support a verdict. See, e.g., *State v. Voorheis*, 844 A.2d 794, 796–97 (2004) (text of instant messages between defendant and mother of minor girl that contained graphic and sexually explicit language offered substantial evidence that defendant had attempted to promote a lewd performance by a child and to incite another to commit a felony and supported his conviction on both charges).

¹³⁸ See *Arroyo v. Volvo Group North America, LLC*, 805 F.3d 278, 280–81, 287, 288 (7th Cir. 2015).

¹³⁹ See *id.* at 285, 287.

¹⁴⁰ *Id.* at 285.

time off for military reserve duty. I certainly give her credit for serving our country but of course I am also responsible for our business needs.”¹⁴¹ During Arroyo’s deployment to Iraq, her supervisor sent an e-mail to Volvo’s head of labor relations complaining that Arroyo had contacted him only once since she deployed, stating that for scheduling purposes, “it would be beneficial for us to know her status.”¹⁴² Responding to that concern, the head of labor relations wrote in another e-mail that “[u]nfortunately, there isn’t a lot we can do. Per the law we have to wait for her. Sorry it isn’t what you wanted to hear.”¹⁴³

[34] Internal e-mails from Volvo personnel also provided support for Arroyo’s disability discrimination claim.¹⁴⁴ One such e-mail showed that Volvo considered disciplining Arroyo for being absent while she was hospitalized for her post-traumatic stress disorder, even though she previously advised Volvo of her disabling condition.¹⁴⁵ In another e-mail, one of Arroyo’s supervisors joked about her absence, writing that there were “several rumors for [Arroyo’s] not being here,” including that “[s]he’s on vacation in Hawaii.”¹⁴⁶ In yet another e-mail, a Volvo employee opined that Arroyo was “really becoming a pain with all this.”¹⁴⁷

¹⁴¹ *Id.* at 281–82.

¹⁴² *Id.* at 282.

¹⁴³ *Arroyo v. Volvo Group North America, LLC*, 805 F.3d at 282.

¹⁴⁴ *See id.* at 287.

¹⁴⁵ *See id.*

¹⁴⁶ *Id.* at 283.

¹⁴⁷ *Id.*

VII. CONCLUSION

[35] Digital evidence has disrupted discovery, civil and criminal litigation, and the practice of law. Advances in technology radically changed the way in which information is created, transmitted, preserved, and accessed—as well as the way in which potential litigants communicate. Technological innovation altered the types of claims that are litigated, the way in which they are litigated, and the kinds of evidence that must be used to support and undercut those claims.

[36] There is no turning back. The days of document production consisting primarily of paper and of hard-copy trial exhibits sitting on easels in front of juries are behind us. When asked to find information about an opposing party, the initial inclination of lawyers who have recently graduated from law school and entered the practice of law will be to check social media to obtain information about that party. To investigate the allegations in a complaint, these lawyers' first instinct will be to search the e-mails on the client's office computer and their messages on cell phones and tablets. All lawyers must acknowledge that digital evidence plays an important role in litigation. Those who fail to understand the relevance of technology and digital evidence to the practice of law do so at their—and their clients'—peril.

[37] The cases discussed in this Article illustrate why lawyers need to stay abreast of changes in technology and be knowledgeable about sources of data they create.¹⁴⁸ To competently and effectively represent their

¹⁴⁸ See MODEL RULES OF PROF'L CONDUCT R. 1.1, CMT. 8 (2015) ("A lawyer shall provide competent representation to a client. Competent representation requires the legal knowledge, skill, thoroughness and preparation reasonably necessary for the representation.") ("To maintain the requisite knowledge and skill, a lawyer should keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology . . ."); see also Robert Ambrogi, *20 States Have Adopted Ethical Duty of Technology Competence*, LAW SITES (Mar. 16, 2015), <http://www.lawsitesblog.com/2015/03/11-states-have-adopted-ethical-duty-of-technology-competence.html>, archived at <https://perma.cc/H3XG-RPT3> (stating that as of October 2015, twenty states have recognized that lawyers have a duty to be technologically competent).

clients, lawyers need to know which digital evidence may be relevant in a particular case, what they should request from the opposing party in discovery, the proper way in which to craft those requests, how to confirm that what they received is what they requested, how to use digital evidence in depositions, as well as how to authenticate digital evidence at trial and overcome potential objections to its admissibility.

[38] As the widespread adoption of new technology continues, and more companies, industries, and governmental entities recognize the transformative power of big data and analytics, the volume of data that will be relevant in litigation will increase exponentially. The frequency with which digital evidence will be used in litigation, in government investigations and administrative proceedings, and at civil and criminal trials will soar. It will become clear to lawyers and clients that gaining competence, if not expertise, in the use of digital evidence is not a necessary evil, but a way to enhance the litigation strategy for a case and to increase the likelihood of a successful resolution. The ubiquity of digital evidence means that litigation and data are inextricably intertwined and that mastering “connected” discovery and maximizing the value of digital evidence are critical skills for today’s lawyers.