

## **Exemplary Evidence**

### **Working Title: Cell Phones Are the New DNA: The Emerging Role of Mobile Device Forensics in Wrongful Conviction Exonerations**

**Caption/Teaser: New evidence produced from testing using innovative technology can open the door to judicial action for wrongful conviction review and exonerations. For decades DNA testing was the most popular and effective example of new technology. Now mobile device forensics is emerging as the most promising form of new evidence, because of its speed of technology innovation and adoption, also its support of a diversified number of proof vectors as compared to DNA.**

**Photograph Concept: 2008 vintage feature phone / flip phone**

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I want to share with you a widely available form of digital evidence lawyers are using to exonerate wrongful convictions, especially first degree murders. I will tell you Nidjia Nicks' story of a flawed district court trial and conviction thirteen years ago followed by a trip to the Minnesota Supreme Court to get an evidentiary hearing. And then the five years I spent working with a relentless appellate public defender in post-conviction work with the victim's old cell phone. I used new, advanced forensic techniques to find exculpatory call logs. They had an impact and you'll discover if Mr. Nicks' day of freedom came to fruition. I want to explore with you the concept of cell phone evidence emerging to join DNA as a powerful tool in exonerating wrongful convictions.

My hypothesis or proposition centers on how new technology and rapidly changing methods and tools provide a steady stream of opportunities for the Innocence Project, appellate public defenders, and private criminal defense attorneys to recover exonerating evidence in wrongful conviction challenges using advanced mobile device forensic science.

I will compare mobile device with DNA evidence. Similarities comport with effective application to wrongful conviction cases in the U.S. Differences between mobile device and DNA evidence may support mobile first as the most promising form of new evidence. How can counsel effectively use mobile device forensics to recover new evidence in wrongful conviction challenges? What are the best opportunities to leverage mobile device forensics during the post-appeal time window to recover new evidence to qualify for reduced standards of proof? Read on to learn about a wrongful conviction case study of a first degree murder with a life without parole sentence in Minnesota. Discover how an advanced mobile device forensic examination of the victim's feature phone from March 2008 recovered new, material evidence which contradicted eyewitness testimony and provided the wrongfully convicted defendant a new trial.

### ***Cell Phone versus DNA Evidence***

Let's compare mobile device with DNA forensic sciences. There are many similarities between them. The evidence characteristics the two forms of science have in common are the reasons both are so successful in delivering new trials in wrongful conviction cases. Both apply universally to all persons in the U.S. Everyone has DNA and everyone from ages 18 to 49 has a cell phone (Pew Research Center, 2021).

Yet many differences prevail between the two sciences due to the speed of technology innovation and the strong adoption of cell phones in society. These differences go to identify cell phone forensics as the most promising form of new evidence for wrongful conviction exonerations. I think it wise to evaluate the use of new cell phone evidence in all wrongful conviction cases, if applicable.

### ***Similarities Between Cell Phone and DNA Evidence***

The most important similarity between mobile device forensic science and DNA science is technology based innovation that goes to the same novelty requirement for new evidence to open the door to wrongful conviction review in the courts. Both sciences apply universally to all of us in society today. Everyone has DNA as part of our body and everyone has a cell phone to interact with the world.

The recovery and analysis of DNA and mobile device evidence are uniquely effective in wrongful conviction cases. Why? Due to the frequency with which they produce relevant, probative, even material evidence, on which these cases turn. And, both of these sciences have destructive use cases for which lawyers must watch and manage.

### ***Differences Between Cell Phone and DNA Evidence***

DNA evidence is regularly tested and examined by law enforcement before district court trials and has been for a decade or more. Therefore, old, untested DNA challenges are now rare. But the story for mobile evidence is different due to the fast pace and strong adoption rate for mobile technology innovation. Older, untested cell phones, like flip phones and burners, are available for examination. They're stored in evidence lockers all over the U.S. at municipal, county, state, and federal levels waiting for someone to notice and justify an examination and wrongful conviction challenge.

Many forms of descriptive proof exist for cell phone evidence as compared to the binary DNA outcomes where the evidence matches or it doesn't. For instance GPS device location evidence answers the Where and When questions. Photograph and Video evidence answers Who, What, Where, and When questions. Phonebook contacts answer the Who question. Messages and Emails answer Who wrote What questions. And Voice messages answer Who spoke What questions.

Due to cell phone lock codes or passwords, which are constitutionally protected personal knowledge, the defendant's cooperation with a cell phone examination, or the lack thereof, makes a big difference in accessibility to the device evidence. DNA evidence, conversely has no personal knowledge requirement, and therefore accessibility is usually straightforward. Interestingly, biometric-based lock codes like face, fingerprint, or iris recognition, are not legally considered personal knowledge and therefore, group such cell phones with DNA on accessibility protection.

Significant differences in uniformity of training and proficiency in mobile device forensics exist in law enforcement as compared to DNA forensics, which is usually conducted in accredited labs with strict standards and testing. Also many mobile examiners in law enforcement are limited by time constraints and the crush of device backlogs to conduct high quotas of exams per day. But private examiners, conversely, may have more freedom, time, and specialized tools to conduct a more thorough examination on behalf of the wrongly convicted defendant, which can be a substantial advantage.

But cell phone forensics has drawbacks as compared to DNA evidence which lawyers must know and manage. Sometimes lawyers have to prove the phone was in the hand of its user. And some cell phones, usually old flip phones, have little memory and therefore limited evidence. Also, cell phone glitches, for example repairs or passcodes, are problematic and must be resolved before evidence can be produced. And most important, examiners must make sure the recovered mobile evidence was caused by human action and not passively by the phone's operating system.

### ***Recover New Cell Phone Evidence***

So what kinds of mobile evidence are probative in wrongful conviction cases? Well, device locations, photographs, video, Wi-fi networks, and Bluetooth networks are good for alibis. Messages, chat, and voice

mail are good for communications. Activity evidence like steps, distance, stairs climbed, and heart rate are great for human motion and condition. And web browsing and Google search evidence go to probe motive and intent well.

Pattern of life evidence is exciting the field of mobile device forensics now. It is defined as insights into digital behaviors and user habits including normal routines in day to day life as revealed by mobile evidence. Examples include timelines for phone power on and off, battery usage, phone screen locks and unlocks, and phone spatial orientation from vertical to horizontal. Pattern of life inferences can also be drawn from device connections using Bluetooth and Wi-Fi networks to the user's vehicles, watches, fitness trackers, and also the phone's data consumption from Wi-Fi and over the air from 4G LTE and 5G cell towers.

### ***Opportunities to Leverage Cell Phone Evidence***

So let's identify opportunities to recover new evidence that can be used post appeal to win a new trial. Lawyers can seek out old flip and feature phones that law enforcement during their pre-trial examination could not connect to their forensic workstation for a proper examination. So they may have given up and photographed some, but likely not all, of the phone's screens. So there's missing screen evidence and what is produced can't be digitally searched because it is photographic pixels and not text. So in a post-conviction timetable you have a chance of connecting to the device and finding exculpatory evidence. And you can use new advanced hardware techniques like JTAG (Joint Test Action Group), chip-off, and ISP (In-System Programming) to extract phone memory and get deleted evidence.

What about iPhones? 2020 and 2021 have brought a renaissance to iPhone forensics. Examiners can now extract the iPhone's full file system instead of getting only a paltry iTunes backup. We can recover abundant, deleted evidence and new iPhone databases which expose pattern of life evidence and other new evidence we've literally never seen before that can open the door to wrongful conviction review.

What about Android smartphones? 2020 and 2021 have also brought meaningful innovations to Google's mobile platform. We can now bypass many passwords and defeat encryption to get deeply probative extractions instead of relying on disappointing Android backups. And, like iPhones, we can recover abundant, deleted evidence and new databases which expose pattern of life evidence and more for judicial review.

### **Case Study**

We've arrived at Nidjia Nicks' case study which took place in Minneapolis Minnesota. It was a successful wrongful conviction and sentencing case. He was convicted of first degree murder with a life without parole sentence. Post appeal we performed an advanced mobile device forensic examination on the deceased victim's old flip phone. We extracted old cell phone electronics and recovered new, material call log evidence which contradicted several eyewitness' testimony.

The key facts were the threatening phone calls allegedly placed by Mr. Nicks with the victim and allegedly overheard by the witnesses. It was the most persuasive evidence directly showing premeditation for first-degree murder. Post appeal the parties focused on whether the victim's cell phone call logs supported or refuted the assertion and testimony that she received threatening calls from Mr. Nicks.

The guilty verdict at trial and sentencing occurred in June of 2009. Post-conviction relief was denied without an evidentiary hearing in December of 2011. On appeal the Minnesota Supreme Court disagreed in May of 2013 and ordered an evidentiary hearing.



MCKEE V. Laurion 2013 – Minnesota Supreme Court Decision And Aftermath  
JANUARY 2, 2013  
"Doctor Sues Patient For A Negative Online Review—Really?!"  
By Dan Hinmon, *Health Care Communication*  
<https://tryingourpatients.wordpress.com/david-mckee-md-v-dennis-laurion/>

So the mobile device forensics team got busy with our examinations. We partnered with the Minneapolis Police Department to find the truth. Soon we determined the cell phone photography examinations were incomplete and we needed a probative cell phone extraction. Chip-off was available, but destructive. So counsel negotiated access and the chip-off extraction recovered new, material, call log evidence from the victim's flip phone. It showed no live conversation between the victim and the defendant. It contradicted eyewitness testimony.

The evidentiary hearing lasted two days in September of 2015. Three experts testified and the judge's order issued in January 2016. The murder convictions were vacated and a new trial was granted.

A Public Defender was assigned to Mr. Nicks in March of 2016 after which numerous hearings were convened. A petition for guilty plea was tendered in December of 2016. But it was for reduced charges of murder in the second degree, without intent. Sentencing was ordered the same month.

The plea bargain was negotiated for 204 months. Mr. Nicks received credit for time served. He was released on parole on July 1, 2019.

*Next month Exemplary Evidence will explore the digital forensics of personal injury law, specifically motor vehicle accidents with a distracted driving fact pattern. Seek out Minnesota Lawyer to read about relevant civil and criminal case studies in our state and best practices you can use for litigating your first distracted driving case.*