Blockchain as Evidence

BY GEORGE “GEO” BELLAS

Despite the hoopla, most attorneys know absolutely nothing about blockchain. Bitcoin—a virtual currency—is the first and most popular application of blockchain technology, but blockchain has much broader applications. Over the next several years lawyers can expect to be dealing with blockchain issues with increasing frequency. Blockchain will be an issue in divorces, business acquisitions, estate planning, real estate, employment, personal injury, and practically every aspect of business. This technology will create new opportunities for business owners and lawyers. And it will create issues during trial as courts struggle to understand it and deal with it.

What Is Blockchain?

The concept of a blockchain was first conceived in 2008 by someone named Satoshi Nakamoto, which may be pseudonym for someone or a group of people, who introduced a white paper.

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Negligent Hiring & Retention of Driver, Punitive Damages for Doing So, and Barring Evidence of Reduced Rates for Plaintiff's Medical Expenses: Denton v. Universal Am-Can, Ltd.

BY RICHARD L. TURNER, JR.

Addressing issues that have caused some confusion and consternation among practitioners representing both injured plaintiffs and those defending truck drivers or cab drivers and their employers, the First District Appellate Court recently found, applying Indiana law, that "special circumstances" might apply to allow plaintiffs (husband and wife) to pursue and recover damages in an action for negligent hiring and retention of a defendant driver by a trucking company, even in light of the fact that the employer accepted vicarious liability for the alleged negligence of its driver employee. Further, the appellate court found that trial court correctly barred defendants from introducing evidence that the medical expenses of the husband, James Denton, were paid at reduced rates accepted by the providers.

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describing the open-source block chain technology that underlies the basis for the cryptocurrency known as Bitcoin.

Blockchain is a totally disruptive technology and is now being used in many industries to create a shared, immutable record of any asset to create a tamper proof record of the asset or record. This avoids the necessity of relying on an old-fashioned record or database. It makes the record virtually impossible to tamper with. Blockchain actually makes a record more trustworthy because it builds on every other transaction. Any changes or corruption is readily apparent.

Basically, blockchain is a method of adding new data into a system. The data is added to the block in a blockchain by connecting it with other blocks in chronological others creating a chain of blocks linked together. Data can only be added in the blockchain with time-sequential order, which makes it very difficult to modify and thereby making it very secure. The data is not located in one location—it has no central authority or master. Rather, the data is located in aggregates (or “blocks”) that are time-stamped and form an immutable chain of sequenced data—which is where the name “blockchain” is derived. This distributed network provides security and continuity since any attempt to change or hack the system will show the altered version is inconsistent with the copies at the other points in the chain. Hospitals are now using it to store patient records in a highly protected system while allowing sharing between hospitals, providers, and insurance companies. Blockchain has also become the centerpiece of a radical change in financial technologies known as “FinTech.”

Cryptocurrency Is an Application of Blockchain Technology

Blockchain is the underlying technology that forms the basis of digital currencies or “cryptocurrency.” Cryptocurrency is nothing more than a digital asset created independently from any government or bank.

In the traditional exchange of money, the money is transferred thru an intermediary—usually a bank—which takes a commission on the transaction.

On the other hand, in cryptocurrency technology the intermediary is a blockchain which is a collective group of systems that verify the transaction. It is faster, more secure and easily more traceable than a bank transaction. It begins when you decide to accept payment for services or a product by Bitcoin or another form of cryptocurrency.

Bitcoin is only one of several forms of digital currencies which includes Litecoin, Ethereum, and others. The technology underlying blockchain creates a type of digital ledger that is stored in a wide-ranging network. The data is stored on multiple computers at the same time. When data is added to the chain, it adds to the existing block of data and creates a chain of data.

Illinois Steps Up to the Block

Some states have already adopted legislation that promotes the development and use of blockchain. Illinois continues to be a leader in technology-related legislation. Under the Illinois Blockchain Technology Act, “blockchain” is defined as “an electronic record created by the use of a decentralized method by multiple parties to verify and store a digital record of transactions which is secured by the use of a cryptographic hash of previous transaction information.” Among other things, the Act specifies permitted uses of blockchain technology in transactions and proceedings, such as in smart contracts, electronic records and signatures, and provides several limitations, including a provision stipulating that if a law requires a contract or record to be in writing, the legal enforceability may be denied if the blockchain transaction cannot later be accurately reproduced for all parties. The Illinois Blockchain Technology Act takes effect in January 2020.
Blockchain will serve to authenticate records and will form the basis of “smart contracts” that will protect the parties and insure performance. There are many uses of blockchain technology that are far beyond the intended scope of this article and there are multiple legal implications of the use of the technology.

Blockchain on Trial – A New Evidentiary Issue

Lawyers will be facing the problem of introducing blockchain data into evidence at trial. Sounds daunting, but it is really not that complicated.

Essentially, a blockchain is a piece of digital data. Because of it is inherent trustworthiness, it should be relatively easy to establish the authenticity of the digital evidence.

The Federal Rules of Evidence (“FRE”) has as a basic tenet the requirement for the best evidence to be used at trial. FRE 1002 is referred to as the best evidence rule and requires the production of the original document in court when relevant. FRE 1002 states: “An original writing, recording, or photograph is required in order to prove its content unless these rules or a federal statute provides otherwise.”

Sounds simple, but in the digital age this could be difficult, particularly when the hearsay rule (and exceptions) rears its confusing head. Ener the “Lizarraga-Tirado test” which is based on the case of U.S. v. Lizarraga-Tirado, 789 F.3d 1107 (9th Cir., 2015). In this case the court was confronted with the issue of authenticating the thumbback position on a Google Earth screenshot which was used to determine the location of an arrest. The court admitted the screenshot because the screenshot – the satellite image of the area – is not hearsay. It is merely a photograph of the earth taken by a satellite and makes no assertion. It is, therefore, not hearsay.

The thumbback position on the image is a different issue. Since the thumbback is automatically generated by the computer program, it is not a statement as defined by the hearsay rule and the placement of the thumbback requires some authentication—an objection that was not raised by the defendant. Basic evidence law requires a proponent of the evidence show the authenticity of the proposed evidence for admissibility purposes.

Authentication requires the proponent of evidence to show that the evidence “is what the proponent claims it is.” Fed.R.Evid. 901(a). A proponent must show that a machine is reliable and correctly calibrated, and that the data put into the machine (here, the GPS coordinates) is accurate. See Washington, 498 F.3d at 231. A specific subsection of the authentication rule allows for authentication of “a process or system” with evidence “describing [the] process or system and showing that it produces an accurate result.” Fed.R.Evid. 901(b)(9); see also United States v. Espinal- Almeida, 699 F.3d 588, 612 (1st Cir.2012) (evaluating whether “marked-up maps generated by Google Earth” were properly authenticated). So when faced with an authentication objection, the proponent of Google Earth-generated evidence would have to establish Google Earth’s reliability and accuracy. That burden could be met, for example, with testimony from a Google Earth programmer or a witness who frequently works with and relies on the program. See Charles Alan Wright & Victor James Gold, Federal Practice & Procedure § 7114 (2000). It could also be met through judicial notice of the program’s reliability, as the Advisory Committee Notes specifically contemplate. See id.; Fed.R.Evid. 901 n.9. United States v. Lizarraga-Tirado, 789 F.3d 1107 (9th Cir., 2015).

Authentication of Blockchain Data

The problem with authentication in Illinois should now be solved by the adoption of IRE 902(12) and 902(13) in 2018. New IRE 902(12) is aimed at digital copies, making the following self-authenticating: (12) Certified Data Copied from an Electronic Device, Storage Medium, or File. Data copied from an electronic device, storage medium, or file, if authenticated by a process of digital identification, as shown by a certification of a qualified person that complies with the certification requirements of Rule 902(11) or (12). The proponent also must meet the notice requirements of Rule 902(11).

The key to the rule is that it requires some technological expertise to certify the digital record. But this is easy to accomplish if you take advantage of the provisions of IRE 902(11) which allows for authentication by affidavit and proper notice. IRE 902(12) simply allows use of a certification to authenticate evidence generated by an electronic process or system (e.g., the contents of a website, data generated by an app, electronic entry/exit records of a security system). Rule 902(12) authorizes a certification to authenticate a digital copy of data taken from a device or system (e.g., a mobile phone, a hard drive).

This can be accomplished by using the “hash value” of the record. According to the Sedona Conference Glossary: E-Discovery & Digital Information Management (4th Edition) the “hash code” of a record is defined as:

Hash Coding: A mathematical algorithm that calculates a unique value for a given set of data, similar to a digital fingerprint, representing the binary content of the data to assist in subsequently ensuring that data has not been modified. Common hash algorithms include MD5 and SHA. See Data Verification, Digital Fingerprint, File Level Binary Comparison.

Essentially, the hash value or hash code is used to identify, verify and authenticate file data. Hash functions have many uses in the digital world, the most important for the blockchain is in validating the integrity of a file. This simply means that a technician will certify that the data copied is verified to be identical to the codes in the original file by comparing the hash codes of the original to the copy.

This certification can be accomplished by an affidavit of the technician who extracts the data. The extraction is then saved and an
expert or technician certified that the data in the copy is identical to the original. The certification is filed with a digital copy and notice of the intent to use the record must be provided to the other parties in accord with IRE 902(11).

A certification under IRE 902(11) can also be combined with the IRE 902(12) certification to establish that the information was maintained in the ordinary course of business and the process used to generate the record is itself authentic. The Illinois Blockchain Technology Act permits a blockchain to be used in a proceeding provided it can be properly authenticated. (See Section 10 of the Act)

Thus, a digital record from a blockchain is self-authenticating and admissible when introduced by a written declaration (affidavit) by a qualified person under Rule 902(11). This rule is not well known to Illinois practitioners, but it should be an essential tool in the lawyer's toolbox.

Conclusion

Some states are moving ahead and advancing specific rules to authenticate blockchain data. For example, Vermont passed H.868 (Act 157) stating that: “A digital record electronically registered in a blockchain shall be self-authenticating pursuant to Vermont Rule of Evidence.” Illinois has not yet done so.

Illinois lawyers can now practice in a blockchain-friendly environment and advance uses of this technology in smart contracts and chain of ownership. We can encourage blockchain research and innovation in all industries in the state. However, the technology will require Illinois practitioners to keep abreast of the advances in technology and learn how to use it at trial.

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1. https://bitcoin.org/bitcoin.pdf, which details methods of using a peer-to-peer network to generate what was described as “a system for electronic transactions without relying on trust.”
2. 789 F.3d at 1110.

Negligent Hiring & Retention of Driver, Punitive Damages for Doing So, and Barring Evidence of Reduced Rates for Plaintiff's Medical Expenses: Denton v. Universal Am-Can, Ltd.

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The decision seems to place emphasis on the egregious conduct on the part of the hiring trucking company, in not only hiring a driver with a very suspect driving record, but keeping him on after repeated safety violations, such that the punitive damages claim supported a finding of “special circumstances” so as to allow a separate claim for negligent hiring and retention, even in light of the company accepting vicarious liability. This case applied Indiana substantive law on an injury occurring in Indiana. The question remaining is whether this case changes Illinois law on the viability of a separate claim for negligent hiring and retention of a driver where an employer admits responsibility under a respondeat superior theory, as set forth in Gant v. L.U. Transport, Inc.,? and cases that have followed this earlier decision.

Factual and Procedural Background

Universal Am-Can, Ltd. (UACL) hired David Lee Johnson as a driver on February 3, 2010, despite the knowledge that within three years of applying to UACL, Johnson had been involved in four accidents, had three moving violations, and had his license suspended twice. Johnson had been terminated from four of seven trucking companies he had been employed at previously, for reasons that included tailgating a motorist, a felony conviction, too many points on his license, and crashing into a vehicle after refusing to let it merge onto an interstate ramp. With respect to the last incident, Johnson testified, “I don’t have to let nobody off a ramp”. The safety coordinator for UACL, upon initially reviewing Johnson’s application, rejected it and the company’s procedure called for the application to be placed into the companies “no-hire” file. However, in this instance, the file went to the safety director who, while acknowledging that Johnson was a marginal candidate, conceded that the employer was forced to accept marginal drivers in order to make a profit and hired him. This same director later agreed that Johnson never should have been allowed to drive a UACL rig.

After being hired by UACL, Johnson accumulated five warning violations a few weeks later and was placed on probation for six months; then later received a speeding ticket, three moving violations, a logbook violation and had his license suspended. Despite the suspension, UACL dispatched Johnson during the period his license was suspended. The safety director admitted that the company never monitored his license to operate a vehicle for them.

While driving on a suspended license above the speed limit on an interstate highway in Indiana on February 8, 2011, Johnson crashed into a Jeep being occupied by the plaintiff, James Denton, which was apparently stopped in traffic due to the presence of another driver coming at them driving the wrong way on the interstate. The impact drove the Jeep into the right lane where it slammed into the fuel tank of another semitruck, causing fuel to spill over the inside of the vehicle Denton was in. He managed to crawl out of the rear passenger...
window and was taken to hospital. Denton underwent nine surgeries, including spinal fusions and three knee surgeries; with a prosthetic metal knee and a neurogenic bladder, requiring him to regularly catheterize himself and wear adult diapers. He has suffered post-traumatic stress, depression and anxiety; and has been unable to work since the collision. He regularly takes pain medication which has left him with debilitating side effects. He continues to see a counselor for depression and anxiety.

A jury in Cook County awarded the plaintiff and his wife compensatory damages of $19,155,900.00, finding that the defendants were negligent, and that UACL was also negligent in the hiring and retaining of its employee, Johnson. The jury also awarded punitive damages of $35 million, having determined that UACL's conduct was willful and wanton. The trial court denied the motion of the defendants for judgment notwithstanding the verdict and a new trial, and entered judgment in favor of the plaintiffs. On appeal, the defendants contended that the trial court failed to follow this appellate court's mandate in an earlier appeal arising out of this same claim, Denton v. I., when the trial court applied Illinois law to the issues of damages and admissibility of evidence related to the collateral source rule. Among other issues raised on appeal, the defendants also contended that Indiana law precludes recovery of damages against UACL attributable to the negligent hiring and retention of Johnson, because UACL admitted to vicarious liability for Johnson's actions.

Application of the Collateral Source Rule to Evidence of Reduced Rates for Medical

The trial court barred testimony offered by the defendants regarding the reduced rates providers accepted for Denton's medical treatment under the collateral source rule. Citing to Wills v. Foster, and Arthur v. Catour, the appellate court found that the collateral source rule prevents defendants from introducing any evidence that plaintiffs' losses are subject to or have been covered by insurance or other independent sources. But, in light of Denton I, in which the appellate court found that the substantive law of Indiana law would apply in the case, the defendants argued the trial court improperly excluded the evidence of the reduced rates accepted on the bills. However, as the appellate court explained, the issue of damages is an evidentiary issue, and the law of the forum, in this case Illinois, applies to the admissibility of a particular piece of evidence, particularly where the evidence is subject to exclusion under a local rule, and the trial court appropriately excluded the collateral source evidence here.

Negligent Hiring and Retention of Johnson

The defendants argued that in light of Indiana law, a company's acceptance of vicarious liability for the alleged negligence of its employee categorically relieves that company for any additional liability for negligent hiring and retention, citing to Sedam v. 2JR Pizza Enterprises, LLC. In reviewing Sedam, the appellate court found reliance on that decision misplaced, in terms of the determination as to whether Indiana would allow both claim theories to proceed together. The court in Sedam spoke to the existence of "special circumstances" which would allow an injured plaintiff to pursue a negligent hire/retention claim even where the employer admits vicarious liability, and found such "special circumstances" to exist here because without their negligent hiring/retention claim, plaintiffs would not have been able to seek punitive damages against UACL under Indiana law. In Indiana, punitive damages may be awarded upon a showing of willful and wanton misconduct which the defendant knows will probably result in injury; or gross negligence, defined as a conscious, voluntary act or omission in reckless disregard of the consequences to another party.

Further, the award of the punitive damages was not against the manifest weight of the evidence. UACL's conduct here in retaining Johnson after he continued to violate its policies, and in failing to monitor his commercial driver's license or motor vehicle record while in their employ, resulted in Johnson operating a vehicle for the company while on a suspended license when he hit Denton. The appellate court found it could not say the jury's determination to award punitive damages in the amount it did was against the manifest weight of the evidence or that the evidence was insufficient to support the award.

Possible Implications of the Decision

The general rule in Illinois is that, once an employer admits responsibility under respondeat superior, a plaintiff may not proceed against the employer on another theory of imputed liability, such as negligent entrustment or negligent hiring.

The theory has been that, although negligent entrustment of a vehicle may establish independent fault on the part of the employer, it should not impose additional liability on the employer where that employer has conceded responsibility for the acts of its driver and is thereby strictly liable for the employee's negligence. Under this reasoning, once the principal has admitted its liability under a respondeat superior theory, "the cause of action of action for negligent entrustment is duplicative and unnecessary. To allow both causes of action to stand would allow a jury to assess or apportion a principal's liability twice." If the employer were not to admit vicarious liability, the Gant analysis does not apply and a negligent-training claim may stand, as it would create no danger of a judge or jury assessing or apportioning an employer's fault twice.

Illinois has recognized a separate cause of action against an employer for negligently hiring, or retaining in its employment, an employee it knew, or should have recognized, was unfit for the job so as to create a danger of harm to third persons. This theory of liability is based upon showing (1) the employer knew or should have known that the employee had a particular unfitness for the position so as to create a danger of harm to third persons; (2) such particular unfitness was known or should have been know at the time of the employee's hiring or retention; and (3) this particular unfitness proximately caused the plaintiff's injury. In the context of liability for the actions of a taxi cab driver on the part of the company to whom the
The driver was hired, the court in McNerney did not seem concerned that much with whether there was a valid basis to find liability on the theory of respondeat superior for the actions of the driver in sexually assaulting the plaintiff. The common carrier has a high duty of nondelegable care. Therefore, liability for negligence in hiring or retaining the driver would exist.

The question remains as to whether Denton changes the law in Illinois, or is simply an Illinois appellate case interpreting substantive Indiana law. That is, might Denton be interpreted as pointing to a possible change in the analysis of employer liability such that, in certain circumstances, a separate cause of action for employer conduct or misconduct in hiring or keeping a driver on might arise even where the employer acknowledges vicarious responsibility for the negligent actions of its driver?

Perhaps in the future, when an Illinois appellate court has an opportunity to apply Illinois law to a cause of action originating in Illinois, it will have an opportunity to determine whether it should consider the concept of ‘special circumstances’ in determining whether to allow a cause of action for negligent hiring/retention even where the employer admits vicarious liability under a respondeat superior theory of imputed negligence, as the appellate court here in Denton did in applying Indiana law. Those special circumstances may be determined to be present when the employer’s conduct in either hiring or retaining the misfit employee rises to willful or wanton misconduct; or is determined to be present because of the special duty common carriers have to the public at large.

Truck drivers, cab drivers, bus drivers, heavy equipment operators, or others who are required to hold special licenses and assumed to have advanced training, should be held to particular standards. And it would seem, so should the employers who hire or retain them. The failure of an employer in egregious circumstances to screen or monitor its misfit driver should allow for the ability to maintain a separate cause of action even where the employer admits vicarious liability. Public policy, in protecting the public from enhanced danger in allowing unqualified, or worse yet, dangerous drivers behind the wheel of big rigs would seem to point to allowing a separate cause of action for negligent hiring or retention as a means of stemming the hire of such drivers where the employer knew or should have known of the risk to the public in putting such a driver on the road. Certainly, ‘special circumstances’ exist in such situations to justify recognition of such a cause of action, regardless of whether punitive damages are pled or not.

2. 331 Ill.App.3d 924 (1st Dist., 2002).
5. 216 Ill. 2d 72, 833 N.E. 2d 847 (2005).
6. 84 N.E. 3d 1174 (Ind. 2017).
7. See, e.g., Gray v. Westinghouse Electric Corp., 624 N.E. 2d 49 (Ind. Ct. App. 1993);
12. McNerney, supra note 11 at ¶ 54.
13. Id. at ¶ 78.