

Can Artificial Intelligence Hold Copyright or Patents?

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Announcer:

Greetings and welcome to Mind Matters News. Throughout much of the '2010s, various legal battles ensued regarding the copyright status of a selfie taken by a monkey. In the end, the US courts and Copyright Office held that animals do not have any legal authority to hold copyright. Many years later, the legal rights of more non-humans were called into question, this time, artificial intelligence. Is AI able to hold copyright or even patents? Today, we have lawyer and Mind Matters news contributor Richard Stevens to answer these questions.

Robert J. Marks:

Welcome to Mind Matters News. I'm your non-patentable host, Robert J. Marks. Today, we talk about whether artificial intelligence should be named as an inventor on a United States patent. Some believe a patent gives an inventor the right to manufacture their invention without any competition. The truth is a little bit more sobering. Hal Philipp, the inventor of the modern touchscreen you probably use daily, says patents only give the owner the right to sue. If a patent holder doesn't sue anybody can use the technology. Patents are written into the United States Constitution, but the US government will never defend a patent. That responsibility belongs to the owner of the patent. Hal Philipp sued Apple when Apple used his touchscreen technology on their iPod. Big companies often use patented inventions without permission. Big companies know that a patent holders must spend big bucks to sue them in federal court.

Rich big companies can either bully or negotiate and buy the patents for big bucks. Defending a patent is expensive, so is filing for a patent. The rule of thumb is that the writing and submitting of a patent costs the same as a new high-end car. Even after that, there are periodic payments that must be made to the US patent office to keep the patent valid. I have served as an expert witness in more than one patent dispute, and the money patent owners pay attorneys and expert witnesses would make your head spin. Patents are issued to inventors to protect the inventor's intellectual property. Should an artificial intelligent computer program ever be listed as an inventor of a patent? If Hal Philipp is right and the only utility of a patent is the ability to sue, would AI have any right to sue for a patent infringement? Does AI have the right to sue?

That's our topic today. Our guest is Richard W. Stevens Esquire. Richard is an attorney and an author, and he has written extensively on how code and software systems, evidence design, and biological systems. He holds a JD with high honors from the University of San Diego Law School and a computer science degree from UC San Diego. Richard has practiced civil and administrative law litigation in California and in Washington DC. He's taught legal research in writing at George Washington University Law School and at George Mason University Law School, and he now specializes in writing dispositive motions in appellate briefs. Now, I had to look up the term dispositive, and so I'm going to make the listener look it up also. He specializes in writing dispositive motion in appellate briefs. He has authored or coauthored four books and has written numerous articles and spoken on subjects including legal writing, economics, the Bill of Rights, and Christian Apologetics. His fifth book Investigation Defense is forthcoming. Is it still in the hopper, Richard, or are you done with it?

Richard Stevens:

Thank you, Bob. No, I'm actually finished with the book. It's just a matter now of packaging and getting it out. Yeah.

Robert J. Marks:

Okay. Well, congratulations. So welcome to the podcast. Before we start, I have a question for you. An attorney's degree is called a JD or a Juris Doctor. That's the degree that you have. It's the equivalent of a PhD, but nobody calls an attorney, doctor. I don't think they ever have. What they do is they call them Esquire, like attorneys often use a suffix like I introduced you as Richard W., Stevens Esquire. What's the deal with Esquire? Why don't they use the doctor? What does Esquire mean? Do you know?

Richard Stevens:

Oh, I don't know the precise background of it, but somewhere along the line, Esquire in England came to identify somebody of some prestige and typically a landowner and that kind of thing who was not in the royalty or the royal family in any way. And somewhere along the line in the '1800s, somebody picked up the idea of appending that to lawyers names. I don't usually use it much, but sometimes, you want to use it in correspondence because you want to tell a judge or another reader that you're a lawyer without putting that down in writing. Hey, I'm a lawyer. That kind of thing.

Robert J. Marks:

I see. And so it's a pretty universal indicator then, huh?

Richard Stevens:

Very often. You could put JD after your name, but fewer persons know what that means. So yeah.

Robert J. Marks:

Okay. Well, let's talk about patents. I have three US patents. All three of them are totally worthless. They were patented at a great expense, but nobody ever picked up the notion to develop them and to reduce them to practice and to market them. What's the criteria for being granted a United States patent?

Richard Stevens:

The whole procedure is one thing, and we can talk a little bit about that. The other is though, what the meat of a patent is, what exactly the law is trying to look for and what the patent office is looking for. So we can talk about that because I think that's most relevant to our listeners. There are basically three things that have to be established for something to be patentable, that go to the merits of the patent, not looking at the application and all the paperwork. First is that it has to be new or novel. Whatever the idea is that you're deploying or producing here has to be new or novel. That simply means that it hasn't been done before.

Beware of a simple answer like that, but that's what it means, novel. It hasn't been done before. It's not predicted inside some other patent. For example, sometimes a patent will have multiple elements and you try to patent one part that's already been patented. Well, they say it's not new and novel. Somebody else already incorporated that idea. The second thing is utility or useful. Is the thing useful and that, eye of the beholder, but a lot of things have some use. That's not a tough one to overcome, but what that does is it keeps the patent office from having to process applications for silly things that don't do anything, but they're new, so that's great.

The third one is the term, non-obvious. And that's probably the most litigated issue. It has to be non-obvious, which reminds me of back in the day, I don't know if it's still done a lot, but in software, we used to talk about things that were non-trivial. It's the same idea, non-obvious meaning it's not something that would've been obvious to somebody who works in the same area as the inventor, and that's subjective, but that's what it is. Those are the three things you really need to show.

Robert J. Marks:

It sounds Richard, like these are judgment calls, if you will, and I think one person might say that a patent passed all these three and another one doesn't. The same thing is true with art, I believe, except that art's a little bit more subjective. It's in the eye of the beholder. Do you think that these things being new, being useful and being non-obvious are in the eye of the beholder?

Richard Stevens:

I think that's true, but what happens, and it's part of the tradition of the common law and part of the tradition of any bureaucratic agency, is that the people who are in the decision making business, they talk to each other. They oftentimes have to write opinions about why they made the decision they did. And so the patent examiners, the professionals who work at the US Patent Trademark office, who do this, who evaluate patents, they talk to each other. They have their conferences, they have journals. It's a whole body of understanding so that if you are going to be a patent examiner, you're going to learn how to do this and how to would be, what does everybody else do? So you start to get a body of understanding of, okay, we never consider ABC to be new and novel. We consider DEF to be new and novel, and you start to get a sense of it.

Once that body of understanding goes, and then it propagates through the court system, then the practitioners, people who are drafting the patents, people litigating the patents, will have a body of knowledge to refer to and say, okay, what we're proposing today is new and novel because after all, look at these other cases where it was found to be new and novel, and ours is like that. That's the method of the common law, and that's how it happened. So it's subjective, yes. But it becomes a body of understanding so that you can somewhat predict it's not totally random.

Robert J. Marks:

Yeah. This is interesting. I know in the filing of my patents and in other patent applications that I'm familiar with, the patent office usually looks at it, and I think they're almost required to come back with some prior art. They reference some previous patents, and in my case, when they came back with this, the other patents were just, I don't know, they were just out in left field. They had very little to do with my patent, and my patent attorney said, "Well, these guys, they're technical, but they live in DC and they have a high cost of living and not many people live there, and so therefore, these examiners are not top of the drawer people." Do you have any comment on that, or maybe you'd like to stay away from that as a third rail? I don't know.

Richard Stevens:

Well, it's actually not my area of knowledge. A very, very good friend of mine, we started practicing law together way back in the day, and she was a regular civil litigator. Then she went on to become a patent lawyer, and you have to take a special bar exam for that, by the way. But I've kept in touch with her over the many years now, and she would be probably a better person to ask that question, although she'd probably want to go off the record too. But as far as whether they're qualified people or not, I don't

know. I do a lot of litigation in the federal government, and I think it's safe to say that you can be pretty high up in the federal government and not really be all that strong in your field of practice.

Robert J. Marks:

And it could be that every organization has its weak links, and maybe we just hit a weak link in the experience as I'm talking about.

Richard Stevens:

Well, actually, it's very common. I see this all the time, whether it's regular litigation or administrative litigation, which is the patent stuff, is that sometimes, the people working in the trenches have to show their boss. They have to show their boss, hey, I did my job. See, I checked in. I looked for prior art, and here's what I found. They're documenting that they looked at what the edges around your patented concept and your patented deployment is. And so oftentimes, in the common law, and certainly in patent, you want to be able to define the edges that you haven't reached. If it's this far to the right, then it wouldn't be. If it's this far to the left, it wouldn't be. But we're in between. And so that's sometimes why prior art or other precedents in cases are cited, is to draw a perimeter around your decision and say, "See, mine's justifiable because it doesn't go to the edges."

Robert J. Marks:

I would imagine that the patent examiners have a quota that they need to meet in terms of the number of examined patents. And it reminds me of my job as a professor. The number of papers that I write is more important than the quality of the papers. So if they're meeting a quota, unfortunately, it's the quality of the examinations that goes out the door. They're just looking at the number of examinations. We have a saying in academia that the dean can't read, but the dean can count, right? So they can count the number of publications that we have. And I suspect that's the same way with the patent examiners, that they have a certain quota that they have to meet. Hey, what is the criteria for being granted a US patent? Do you have to be a US citizen or can anybody apply for a patent?

Richard Stevens:

I'm not aware of a citizenship requirement. If there is one, it's new to me. It doesn't ever come up with anything I've ever looked at. Pretty much, a person who wants to apply for a patent has to be a human. Well, that might've seemed obvious until recently, but it has to be human. And the recent decision by the federal circuit held to that extent that under current law, you have to be a natural human being, a natural person. You can't be a corporation. And under the recent holding, you cannot name a hardware software combination, which we might call AI. You can't name that as the inventor on the application because the law requires you name a person.

Robert J. Marks:

Well, you just answered my next question, was that companies are certainly not human beings, and I suspect that I think what you're telling me is that companies cannot be enlisted as the inventor of the patent, but in my patents, they were assigned to a company. That's different, right?

Richard Stevens:

Absolutely. Absolutely different. And indeed, well, there's a whole world of issues between employees and their employers about who owns intellectual property, and oftentimes, that's the subject of contracts, employment contracts or non-disclosures and that sort of thing where you sign up and say,

"Okay, if I do anything and I work for this company, this corporation, and I create something that's patentable, the owner will be the corporation, not me." But on the application, the person who invented it will have to be named as the applicant.

Robert J. Marks:

Okay, because we're going to talk in a little bit about the rights that artificial intelligence has as a non-human. Certainly corporations have rights in some sense that a human doesn't have. And so I wonder if that's an open door, but we'll talk about that in a little bit. How long does a patent last? It's not that long, if I recall?

Richard Stevens:

Yeah, there's a couple of deadlines on it, and it's changed a couple times. Hang on a sec. I wrote that down because I wanted to have that handy for you. If I recall, it's 17 years and 14 years, but I'll double-check that for you. That was my last recollection. 17 years is for the utility patent, 14 for the design patent.

Robert J. Marks:

What is a utility patent and what is a design patent? And what's the difference between the two? And are those the only two types of patents there are?

Richard Stevens:

No, there's more, but there's a plant patent. I'm going to say that three times.

Robert J. Marks:

Plant?

Richard Stevens:

Plant patent. You can actually patent a plant.

Robert J. Marks:

Really?

Richard Stevens:

Yes, you can. And so that's fun, and that not an area that I know very much about, except I know that it's true, and you can read about it, people who invent new plants. So all the people doing that biotech work using plants can patent up the results of their work. But a utility patent is the one that everybody thinks of when you think of a patent. It's a machine, a tool, a device or a process. Software, for example, can be patented. So any number of things like that. So when you think of an inventor working in his or her garage, that's usually a utility patent.

A design patent on the other hand, has to do with the design of a product. For example, you could have a product that did the same thing, but the external design or the design of the internal and external parts is sufficiently different to be novel, useful, and non-obvious to warrant being recognized and protected. So for example, the iPhone. The iPhone itself, when it came out, Apple made that device. There were some patents for some of its utility functions, but there could also be patents for its design, the way it looked, the way it was presented. So somebody couldn't make an exact knockoff of an Apple

iPhone and then market it as their own, because that would be infringing the patent, assuming they got one.

Robert J. Marks:

I see. But that reminds me more of trademarks in terms of shapes, that's patentable as opposed to trademarkable?

Richard Stevens:

Okay, so that's a really nice question. A trademark is a completely different beast. It's protected under different law, actually has a common law basis, and then there are statutes in the states, and there's federal statutes and all the rest. A trademark is the way you present yourself in business to others. It's a way you present yourself. So it can be something that would have a shape, but it can also be a phrase, words or words written in a certain format. For example, the perfect example is the Coca-Cola symbol. It's a very stylized script text. It's been the same for 100 years or more. Right? And Coca-Cola, you write it that way, and that is trademarked, and it can be trademarked indefinitely. Unlike a patent, which expires. So, a trademark sometimes called trade dress. There's all kinds of other terms. Trademark's a wholly different matter, and indeed... But the design of a product is not considered that, it's considered the design of the product. It's the physical manifestation, not something that just communicates the business identity.

Robert J. Marks:

I see. So that's the reason, for example, the shape of an Apple phone would be patentable, but not copyrightable. It's a physical shape. Is that right?

Richard Stevens:

Good question too. Copyright would protect a sculpture, for example. And so that's why one might ask the question, well, wait a minute, isn't this more like a sculpture than it is like a device? But the patent law protects the incarnation, as it were, of the piece of hardware in a certain way. So you might argue copyright, but the law protects it much better if it's patent.

Robert J. Marks:

I see. I visited France one time and went to a place where they made perfume, and I met an interesting guy that was called The Nose. And The Nose, his job was to sit around and sniff different perfumes, and I guess there's also the equivalent of tongues that can taste something, for example, wine and tell you all of the different nuances or the different flavors that go in there. But I've heard that aromas and tastes are not patentable because they can't be quantified. They can't be measured. I thought that was interesting. I guess it's on the list with the perpetual motion machine of things that can't be copyrighted.

Richard Stevens:

You don't mean copyright, patented.

Robert J. Marks:

I'm sorry. You're right. Patented. I'm sorry. Yes.

Richard Stevens:

No, that's fine. But it's always good to have the opportunity to correct you or you to correct me because the clarity on this is important. Well, a smell or a taste is a configuration of neural impulses from stimulation. So that, it's not a device and it doesn't have a design, and it's not something... That's one of the things that you have to do. Now, we talked about new, useful and non-obvious, but when you file for a patent, you have to be able to adequately describe it in a way that someone else could build one.

Robert J. Marks:

Ah, okay. But couldn't you do that chemically with say, a perfume or a something that tasted good?

Richard Stevens:

True. You could do the chemistry, but the sense of smell and taste or the overall composite flavor is entirely in your mind.

Robert J. Marks:

I see. I see. Okay. Let's take a hypothetical. I sue you for infringement on a patent. It seems like this is personal damage that you've done to me, and I would think it would be best tried in a civil court, but all patents are tried in federal courts. And why is that?

Richard Stevens:

I can explain that, but I want to correct myself. It used to be 17 years for utility patents. It's now 20 years. I just want to say that.

Robert J. Marks:

Okay, thank you.

Richard Stevens:

Yeah. Okay. So to sue on a patent. Okay, the first thing you recognize is that the legal right to protect a patent, which is what this whole process is, the legal right to protect a patent is a creature of the US Constitution. And so that's what makes it a federal matter, and the way that the constitution reads it and the way that the Congress has adjudicated it, or I should, legislated on it, and then how the courts have held that patent litigation is federal litigation, and the courts that have the jurisdiction over that, under section three are the federal courts. That's who has jurisdiction just by law. It's not off of Sinai, it's just the way it's set up.

Robert J. Marks:

I see. I was an expert witness in a patent dispute case that was tried at the New York City Federal Court, which is just a beautiful court. It's right near Wall Street. It was close to the World Trade Center. So we were sitting there waiting for our item to come up in the docket and bounce these guys all in orange suits. And the judge had to rule whether these guys were guilty of violating the RICO statutes, which is also a federal crime.

And she got mad at one attorney and said, "Look, I had problems with you with the World Trade Center bombing." This was not the 9/11 incident, but a few years before that, they had put a truck into the bottom of the World Trade Center and tried to explode it. And the judge says, "I've had problems with you before, just go away." Now, this Richard, this was right before the same judge that was ruling on a RICO statute, had to confront us and decide the difference between a neural network and a fuzzy

decision tree. That struck me as an incredibly broad area of expertise these federal judges have to know. I just wonder how they can be competent across the spectrum.

Richard Stevens:

That's a very good question. Just to clarify, also, when you asked me earlier, I wanted to be sure that it was clear to people that patent litigation of the sort we're talking is not criminal, it's civil. So just so they won't think that it's like the World Trade Center bombing.

Robert J. Marks:

Oh, it's still civil, but in a federal court. Is that right?

Richard Stevens:

Yes.

Robert J. Marks:

Oh, okay.

Richard Stevens:

Yeah. So now your question is what does a judge have to know? It turns out that probably, the single most powerful judicial official in the United States is a sitting US district court judge.

Robert J. Marks:

Ah, yes. That's who we were before, by the way.

Richard Stevens:

Yeah. As a result, they're the first line of federal litigation, civil or criminal, and they have to know their stuff, but they don't necessarily have to have encyclopedic knowledge. They don't have to be subject matter experts and everything. That's what the lawyer's job is. So for example, my job is to write up... Most of the work is actually in writing, some of it is oral, but you have to be able to educate the judge, okay, your Honor, this is the law that we're looking at and this is why our side ought to win. And then the other side says, "No, you ignorant idiots. The law is this, and this is how we ought to win." And so the judge can get educated about a matter and indeed factual matters, for example, things about fuzzy logic and whatnot that judge may not have heard of before, but it's up to the lawyers to try to educate the judge, and whether it's in briefs or sometimes through testimony, which I am gathering you gave.

Robert J. Marks:

Yes. Yeah, that's exactly correct. The incredible part is that really, as an expert, I really got to dummy it down. I have to make sure that the common person can understand it. And that's difficult sometimes.

Richard Stevens:

Very, indeed. And you have to recognize that the judge, although we oftentimes might want to revere them, they're a person like you and me in the sense that they don't know everything, notwithstanding, but some of them may say, and so that you do have to educate them like a person just off the street, a smart person, an educated person, someone who wants to know, but someone who doesn't already know.

Robert J. Marks:

And I tell you, I have all the respect in the world for attorneys, because the attorneys on the case, they had to become expert more than the judge in neural networks and fuzzy decision trees. And the case ended, and I asked them, "What are you going to do with all that knowledge about neural networks and fuzzy decision trees?" Because they had been students. They had gone through a couple of graduate courses in that, and they said, "Well, we move on to something else. We take some more graduate courses in some other litigation." So I was really impressed by that, their utility and their ability to adapt to the different cases. That was really, really impressive. So attorneys are good in defending patents. I was advised that you needed an attorney to prepare and file a patent. What would your advice be on that?

Richard Stevens:

Absolutely. I referred to my female colleague who lives in Silicon Valley, and that's what her career has been for the last twenty-five or more years. She worked for Hewlett Packard. Now she's on her own, but she worked for some law firms as well, but almost her entire practice was drafting patents. It's a whole world unto itself. It's different from litigation just as drafting contracts is different from litigating contracts. So similarly drafting patents, but drafting patents is a real challenge because we talked earlier about new, useful and non-obvious. Well, there's an art to drafting a patent so that you can show novelty in the words, because you have to describe this thing at length for the patent examiners and maybe judges to understand. So you've got to be able to show them, okay, this is why it's new. You have to show, this is why it's useful, and this is why it's non-obvious, and you want to draft your patent in a way that it's narrow enough to be defensible, but broad enough so that somebody can't knock it off. It's real nuanced writing.

Robert J. Marks:

So it sounds like it's an art then, huh?

Richard Stevens:

Very much so. And that's why you definitely want to get someone who does it all the time.

Robert J. Marks:

One of the things that you talked about last time was the criterion for patentability, and one of them was non-obvious. I would translate that maybe into the idea of creativity. There has to be evidence of creativity for a patent. How do we define creativity or this non-obviousness for patents?

Richard Stevens:

That's one of the interesting things. The non-obviousness. There are a few ways to try to describe it. In our last broadcast, we talked a little bit about how it's a subjective matter, but the courts, the patent office, and the powers that be, have tried to coalesce around a few definitions, they provide a guide. For example, to decide whether or not there's enough creativity, the courts may ask whether the invention results from, this is a quote, "Whether the invention results from inferences and creative steps that a person of ordinary skill in the art would employ, or something else that's better." So that's it at one level.

Is this something that somebody who works in this area would've said, "Well, that's obvious, duh. Anybody would do that." And then it would not be non-obvious because somebody would testify it's

obvious and be able to show, yeah, we do this all the time, or we'd almost do the exact same thing, and yours is just a tiny variation on what everybody else does. That's one way to draw the line. Another way to say it is that a new invention has to produce unexpected or surprising new results that were not anticipated by the existing technology, or what we call the prior art, is the term of art, prior art. So a non-obvious invention is unexpected by a person who has ordinary skill in that area. For example, the telephone invented by Alexander Graham Bell was not obvious to engineers and scientist of that day.

Robert J. Marks:

I see. Boy, you used some words there that I want to unpack a little bit. As a person that plays around with AI, I claim that creativity is non-computable, and therefore, artificial intelligence doesn't have the ability to do anything creative, because creativity, I believe, is non-computable. But AI can generate unexpected and surprising results, and it does it all the time. I'm thinking about oh, when Lee Sedol, who was the world champion in the board game of Go, was defeated by AI, but one point the program made this incredible move, and all of the people watching said, "Whoa, that's a really interesting move. Nobody would've done that." It was unexpected, and it was surprising.

This happens in artificial intelligence, but it doesn't pass the muster of creativity. In artificial intelligence, we define this as the Lovelace test, which is due to Selmer Bringsjord's Rensselaer. He says, the computers are going to be said to be creative if they generate something outside the explanation or the expectation of the programmer or somebody of equivalent skills. And those results can be, and I've used the word, unexpected and surprising. Do we have a conflict here? If AI generates this stuff, do we have a difference in meaning between unexpected and surprising?

Richard Stevens:

Ask yourself the question, what does unexpected mean? This is where you have the subjective, but it's not just subjective. It's even more than that. It goes to the very heart of what it means to be human or what it means to be conscious. Okay? All this stuff starts to tie into that really interesting stuff. And so if you say something's unexpected, well, there were some interesting formulae that I learned when I was studying in school and learning about calculus and oh, wow, I didn't know that it would do that. Well, does that make it patentable? Does that make it unexpected? Or is it just something I didn't know about yet?

And so there's that whole problem of trying to decide if you're surprised, does that make it creative? Or that just means you're surprised. I have six grandkids that live nearby, and I've had the privilege of being able to watch them grow from zero to wherever they are today. And they've been surprised by all kinds of things. But that didn't mean that it was somehow unexpected in a sort of grand sense. It was unexpected to them. So for me, the test to say, well, whether it's unexpected, doesn't have a lot of content all by itself.

Robert J. Marks:

I see. Okay. So unexpected and surprising. Would that pass the muster of the patent office if AI did something like that?

Richard Stevens:

Well, unexpected and surprising, I guess if someone wanted to say, "Well, it wasn't obvious," the result wasn't obvious and it was also useful and the rest, I guess if it's not obvious, the argument might be though, would somebody who was writing software expect something like this to occur? And so in the case of large search engines, software and things of that nature, they've gotten patents. Well, why

they've gotten patents? Because they were not obvious. Meaning somebody who's just writing software for a living wouldn't necessarily have come up with the algorithms, wouldn't necessarily come up with the whole presentation of the software. So it's not obvious in that way, in that the person who works in that area wouldn't have just said, "Oh, yeah, I would've done that." So that's a little different from being unexpected. It's more like creative. It's like a new way of thinking about a problem. And the new way is what makes us human.

Robert J. Marks:

I see. We did an experiment one time in swarm intelligence where we had a computer program where a bunch of predators attacked a bunch of prey, and they were little dots in a little room, and they would run around. And what we wanted to do was we wanted to perform evolution on these, computer evolution, to see what strategy the prey should use to last the longest. And we ran this and it optimized to something which was incredibly surprising. And that surprising result was that the prey exercised self-sacrifice. It displayed self-sacrifice.

So what happened is one little prey, we call them dweebs, would run around while the predator, which we call bullies, would chase this dweeb around while all of the other prey would cower in a corner. And pretty soon, that one prey would sacrifice itself, and then another one would come out and take its place. This was totally unexpected, the idea of self-sacrifice. But we looked at the program and we finally said, we searched through a bunch of different results, and oh, here's the result that performs the self-sacrifice. I can see where that came from. And so that did not pass the Lovelace test in terms of creativity, because we were able to look at the software and explain why it did what it did.

Richard Stevens:

Okay. But you can look at any algorithm and do that. If you have the definition of the algorithm, then you can know what it does. As I forget who it was that said, basically, if you have a pen and paper, you can solve any computer problem given enough time. And so that's the same here. If you know the algorithm, then you could iteratively or recursively figure out how that's going to run. And if you had to do it manually, you could do it. It could do solution. But actually, interestingly enough, the description of the dweebs and the predators is not surprising, as a matter of fact. It's in nature.

Robert J. Marks:

It is in nature. But the fact that our rules duplicated nature was pretty cool.

Richard Stevens:

Cool. Yes. Cool, absolutely. But now, I want to ask is that non-obvious in the sense that that's exactly why fish swim in schools and why birds flock together? Exactly that reason, because the weaker ones will feed the predators while the others can get away, and that saves the stock.

Robert J. Marks:

Well, I would say that the predator-prey problem would become creative if the prey all of a sudden turned to begin attacking the predators. But there was no flexibility in the software for that happening. So therefore, that creative aspect would never happen. That would be an example of something which was creative, but the software was unable to do that because we didn't allow it to do that.

Richard Stevens:

Isn't that fascinating? That's a very interesting little line being drawn. That's fascinating. Yes, if your software wouldn't have thought of it, then your dweebs wouldn't have thought of it either.

Robert J. Marks:

Exactly. Because there just wasn't the ability in the software to do that. So let's get back to US patents for a little bit. Currently, you've mentioned that only humans can be listed as inventors on US patents. Is there a reason behind that law?

Richard Stevens:

Well, yeah. The reason probably goes back to antiquity. The origin of patent law, as I have come to understand it comes from two angles. I think it comes first, however, from the fact that somebody has made something special and devised a machine or a tool or a process way back in the day, and then somebody else went and stole it and built it and sold it, and they go, "Hey, wait a minute, I came up with that." And the other one says, "Yeah. And so what?" And so the notion that there's an intrinsic unfairness to taking the work product of a creative person, and that some derivative person just steals it and uses it as if it were their own and makes all the money. There's just something wrong about taking that away as the notion of intellectual property is gut level. Hey, I thought of that first. How come you're making a million and I'm still working in the back room here?

So there's that view, and I don't know if it was ad hoc or just good thinking, but later on, economists and political economists kinds of people looked at this and said, "Well, we can justify protecting the rights of a creator of an inventor, in addition to the moral notion that, hey, they came up with it first. They ought to have the right to it, at least for a certain while." But they came up with an additional justification, and that is, if we protect patent rights, we protect someone's time limited right, but nevertheless, right to exploit the results of their creativity and their ingenuity. That will stimulate people to do it because it won't be stolen. You don't have the free rider problem, or you decrease the free rider problem.

So if you can profit it from it, then you're willing to invest more time, invest more money, corral more resources, hire more people to build new and fascinating things. If you know that you can actually recoup your income over time by basically having a limited monopoly on it for 17, now 20 years, or 14, whatever it is. So that whole notion of it's a political economy thing. This is good for society that we will stimulate inventors to spend money in this way that actually helps everyone ultimately, or certainly anyone who wants to use this kind of product. And so you have, what I see as those are the two main justifications. One is the moral right of the inventor, and second is the social economy benefit of stimulating creativity and innovation.

Robert J. Marks:

We do have a number of different cases and technology where the best technology is not won. I'm thinking back to, for example, the war between Beta and VHS. Or Netscape, one of the first browsers being taken to court by Microsoft because there was a lawsuit, that Microsoft was stealing some of the technology of Netscape. And I really liked Netscape back in the days because it lets you actually write HTML software. It was really nice, and Explorer came along and wasn't quite as flexible. So the best guy doesn't always win, do they?

Richard Stevens:

No. But that's the nature of the market in a lot of ways. For example, the VHS and beta, I was a big proponent of beta as well, and you had to pry those out of my cold dead fingers when they finally got rid of Beta. But I had Beta as long as anyone could have it because I had so many things on it. Nevertheless,

as I understand it, you may know a ton more about it, but my understanding was that the Sony basically refused to license out the beta technology at any rate that anybody could afford. So they said, "Well, we're going to play this monopoly for all it's worth." And they had every right to do that. It's not a bad thing. And then people had Beta Maxis as I did a couple of them, but the guys that came up with the VHS format, which is different tape, different formatting, the way the machines worked internally was somewhat different.

So you see, you had the new, you had the novel, you had the useful, and you had the non-obvious. That is, it wasn't the same as Beta. Just because you knew beta doesn't mean you'd know how to do VHS. So that gets a patent. But the market aspects were, the guys that came up with that were willing to license that out. So there were, I don't know how many different manufacturers were making machines that supported VHS tape while Sony hung on tenaciously to their one and they were outsold.

Robert J. Marks:

Yeah. So it was a product of the free enterprise system, which is incredibly resilient, isn't it?

Richard Stevens:

Yeah. Well, it's the buyers that decided that they would rather go with the one where there were all these other manufacturers, a lot more price competition. And as soon as the content creators were producing VHS' then there were so many more people using it. It just, that's how it works. That's how it works. And there are a lot of proprietary and you probably know this too, computer companies that say, we've invented the best mousetrap ever and we're not going to license it. And they ended up going out of business with their best mousetrap.

Robert J. Marks:

This is incredible. There's this very popular robot called Sophia. She's been on late night talk radio, she's done a lot of interviews and she's clunky. I don't know why people are impressed with her, but she has been granted citizenship to Saudi Arabia of all places.

Richard Stevens:

Does she have to wear an e-veil?

Robert J. Marks:

That's a good question. I don't know. She has a bald head, which is transparent, that shows some of the electronics inside her head. So maybe that's okay. She's bald, so she doesn't have to... I don't know the Muslim law on that. But anyway, that surprised me until I learned that Homer Simpson has been given honorary citizenship in Winnipeg Canada. So you have all of these different rights being given to non entities, and so nothing is surprising anymore. Are you aware of any current US laws that gives artificial intelligence rights? We're going to talk about patents in a minute, but any place that gives AI rights.

Richard Stevens:

Well, all right, so the lawyer in me says, I got to define the terms and artificial intelligence, and I rather think you agree. Artificial intelligence is a term bandied about and is applied not as carefully as it might. And when you ask the question this way, I want to answer it by saying, okay, when you say artificial intelligence granted rights, what you're really referring to is hardware and software that form a system.

Robert J. Marks:

Yes.

Richard Stevens:

So another way of saying this would be has a computer or computer system been accorded rights? And I would say at this point, I'm unaware of any state or federal law that accords a computer system, legal rights in and of itself.

Robert J. Marks:

Okay, well, that's good news. That's in the United States, right?

Richard Stevens:

Tight.

Robert J. Marks:

There was a ruling recently made in the US appellate court about AI and patents, and you wrote about this on Mind Matters News. Could you walk us through this?

Richard Stevens:

Well, sure. And I think the listener needs to know a little bit about this, about the background. I won't go way in detail, but just enough. The person at the center of the controversy was Steven Thaler, T-H-A-L-E-R, Thaler. And he's apparently a heck of a entrepreneur and a software designer. So he formed a corporation, and their purpose was to create systems with artificial intelligence that would be able to invent new things. That's the purpose of it, is to actually use artificial intelligence systems to invent new things. So he has taken it upon himself as something of an activist to try to get the world to recognize AI, artificial intelligence systems as creative entities in and of themselves, as though they were human, but they're independent, that they are somehow independently creative. So he has used his computer system reportedly, and I have no reason to doubt it.

He's used the computer system to have it invent things. And then he has applied for patents all around the world to say... Naming the computer system, which is called DABUS, D-A-B-U-S. It's an acronym. Naming DABUS as the inventor. So it's something of a PR move on his part. That's not to denigrate any of the work involved in creating DABUS or its results, but what he's trying to do, it appears, is to get some government to somehow say somewhere and give it stamp of approval on the idea that AI can independently create. And once you get a government to say that, then you can go around telling the whole world, "Hey, my systems are independently creative. After all, the government of somewhere has said so," and the US would be perfect for that. So he's been doing this. And so most recently, and at least at the case at hand, the DABUS system created two inventions and Thaler and his lawyers put together an application and filed it with the patent office.

And on the form, okay? This is a form filling out exercise. And on the form it says, who's the applicant? And he writes down DABUS. All right. And he does it for both patents. Well, when the patent examiners took a look at that, they said, "Wait, it's not a natural person." And they rejected the patent application immediately, not after thinking about what the patent content was, like we have talked about in previous broadcasts, but just the application itself was defective. That's what the whole case is about. Can you apply in the name of an inventor that's a computer system? So that's what came up. And the patent office said, "No, you can't. The law says, that Congress has enacted, and the regulations there

from says that it has to be a natural person." That's what the patent office... Well, the appeal or the review of the patent office is US District Court. And the US District Court heard the case and the US District Court said, "No patent office is correct. The law expects you to put down a human, not a computer."

Then Thaler and his group took it up to the Federal Circuit Court of Appeals, which is homed in DC, but it's the special Court of Appeals that handles certain kinds of cases only, and the certain cases that it handles as reviews on patent matters. And so that's where you go if you have an appellate matter that goes up above, it goes to federal circuit, not to all the other circuits. So that's why it went to the federal circuit in DC and they affirmed the lower two decision makers saying, no, the way Congress has written the law and the intentions of the law are that it has to be a human, a natural person, not a corporation, not a machine who's listed as the inventor. That's the whole case.

Robert J. Marks:

Okay. Richard, why would he do this? For what possible reason? Now, this guy paid big bucks to take his suit before federal court, and why? Why did he do this? If Hal Phillip is right, my friend Hal Phillip said that the only purpose of a patent is a license to sue. Is the AI going to be able to sue? For what possible reason could this guy want AI listed as the inventor? There must be some higher reason here that isn't apparent to me.

Richard Stevens:

If you look back in the various disputes in our society, I'm thinking here in American society over the last many, many decades, there's some really hot button issues we won't go into right this second where one side or the other has said, "The Supreme Court says," and that's all you got to do, right? The US courts say this ABC is true, and therefore they can use that as a selling tool, as a persuasive tool. Well, if the high court or the Federal Court of Appeals says this, then it must be true. So, I haven't interviewed him. I'd like to, but I haven't interviewed him, so I can't hear his side of this, but I'd rather think they have pressed, he would have to say, "Well, I'm trying to get the government to say that my machines are independent creative entities like humans." That's a major victory, business-wise. But it's also a paradigm shift for people. They now start thinking that computers have consciousness. Well, after all, look, the court says they invent things. That's all it's doing.

Robert J. Marks:

That is really strange. So you think he's trying to impose a worldview or an ideology in doing this? Is that right?

Richard Stevens:

I don't know if it's imposed, but to sell is to persuade. So once people are persuaded, and of course, if you've got the federal Circuit Court of Appeals to say that AI systems are the equivalent of natural human beings in creativity, well then you could take and use that in other courts. You could take and use that in arguments for legislation. You could take that and use it in a number of different ways in addition to just aggrandizing the business entity that Thaler runs. But the whole world could, certainly in America, could start to take the view that computers are independently creative and you've written a whole book Non-Computable You to suggest that no, computers can't do that. But if you can get the government to say it, then it must be true. Right?

Robert J. Marks:

Yeah, it must be true. If I was on the other side, if I was on Thaler, is that his name? Thaler. If I was on Thaler's side, I would say, "Look, this human thing is outmoded." And I would use an old parable about the newlyweds where the woman in preparing a meal cut off a good percentage of the ham that she was baking. And her husband says, "Why are you cutting off that good piece of the ham and throwing it away?" She says, "I don't know, my mother did." So they asked her "Mother, why did you do that?" And she says, "I don't know, it's because my mother did." So they went to the grandmother and they said, "Why did you cut off the end of the ham every time?" And she said, "Because the pan was too small."

So I'm wondering if this is the stance that they're taking, that this old idea of just humans is outmoded. It's just something that has been passed down from generation to generation and it's time to review it. Maybe the pan was too short in some sort of sense. I think I know the answer to this, but is AI allowed to be listed as the inventor of patents in other countries other than the US?

Richard Stevens:

The question that is answered with an asterisk. I researched in advance of writing the article for Mind Matters news that I went and looked, and it's in flux a little bit. Thaler has applications in a number of countries, including the EU. It was down in Australia, it was over in South Africa and all these other places and trying to get some government somewhere to allow him to patent something but have it in the name of the inventor, his computer. As of today, based on my research, I'm unaware of any country that has permitted him to do it with the sole exception of South Africa. Republic of South Africa. And my understanding is that the laws in South Africa are very lax in defining some of this. And they don't have, I guess the same exacting standards for patents as other nations. That's not a bad thing, it's just a fact.

So they figure, well, we don't care who invented it, as long as you sated a patent, you're on. So they allowed it, their laws allowed it. But see, in the United States and other jurisdictions too, who can apply for a patent is defined by law. It's defined by statute or perhaps by court decision, but it's defined and it's a little bit arbitrary in the sense that Congress literally could pass a law next week and the president sign it, and that said no, now anything that invented something can be listed as an applicant, and then the law would be different.

Robert J. Marks:

I see. Getting back to the ham example, is there any reason that given that humans are the only entities allowed to be listed as inventors of patents? In other words, it's the law. Yeah, I understand that, but is there reason given for the law? Typically, I know in Supreme Court cases for example, that people write down the judges of the Supreme Court write down reasons why they made their decision. Are there any reasons why only humans can be granted patents in the United States?

Richard Stevens:

Reasons would be what you and I or a group of lawyers and judges or legislatures, if we sat down and talked about it, the reasons would be, as we might've talked about before, which is that the idea of a patent was to protect the creative and innovative spirit and product of humans. That that's what it's about. It also, if you protect patents, has a beneficial effect on the economy in that it encourages innovation, it encourages invention. And because people can get this limited monopoly for 20 years on a utility patent, they can make the money back and maybe some more for having done all this work to create something new. And so the whole notion is this is a human endeavor and humans are the creative ones. You can turn around and ask the question, well, why shouldn't computers be given that?

And the answer is because they aren't creative. They are tools. So for example, I use this example, if you go out into your shed and you use a drill and a power jigsaw and you build a cool thing for the home.

Who made it the drill and the jigsaw? Or you? Well, it's you. Those tools, like any tools, don't jump up and make stuff. And that's the same truth for Thaler's inventions. The thing didn't power itself up one morning, have a cup of e-coffee and decide, hey, I think I'm going to make something new.

Robert J. Marks:

E-coffee. That's good. Yes.

Richard Stevens:

Yeah. So it wasn't that way. Whereas like Edison and Tesla and all the greats and all the unknown inventors, they're out there working on something, they're trying to solve a problem or some idea comes to them. So it's a very human endeavor to be creative. So I think that, giving the honor, recognition to human creativity underlies some of that notion that an inventor really is a human. And as a factual matter, the inventors are humans. These two inventions that DABUS created for Mr. Thaler were the result of him and of his team doing this work to write the software that could do it. The machine did not put itself together. The machine did not program itself, and the machine didn't even give itself the task. So all those things were all decisions and designs by other people. It was still uniquely a human effort. So that's I guess, the reasoning that we might come to say, we're really here to reward or to incentivize human action, not simply to say, "Hey, something made something, we're going to protect it under law." I think there's more nuance to it.

Robert J. Marks:

Is this documented anywhere in the courts, this reasoning that you just went through?

Richard Stevens:

Oh yeah, probably so. I can't point to a case right now, but the arguments have been made on both sides. But the US cases, as we were talking about just a moment ago, Thaler tried to make the argument and he wanted to expand on it and say the computer really did it by itself. It really was a product of the computer.

Robert J. Marks:

That's baloney.

Richard Stevens:

Well, but then the federal Circuit, for example, expressly said, we have been tempted to rule on that line of argument and we're not going to, it says. Words to that effect. I'm paraphrasing it. He said, we're not going to take the bait. Your application has to have a natural person. Fill it in, dude.

Robert J. Marks:

Got you. If this comes up again, I read about the Thaler case, I wanted to just run around the room and scream, and I wanted to inform the court about the reality of the inability of artificial intelligence to be creative. If I wanted to affect the outcome of some future litigation where AI was proposed as the inventor in a patent, can I do that? Should I do that? And if so, what's the best way to do that?

Richard Stevens:

Well, litigation posture is an amorphous question because this is new stuff, exactly where to challenge Thaler or his approach, where to do that, and the court system may be driven by how the case is presented. So I'm not sure I would know the answer to that question today. Certainly if this gets into court again somehow, because maybe Congress changes the law and says it doesn't matter who's the applicant, someone might still challenge it then, when it comes up and say, wait a second, it may be the applicant be that, but the Constitution says you shouldn't be able to have computers do it, because the whole object of the game, the way the founders envisioned it was to protect humans, not to protect computers. So you might get an opportunity from a litigation strategy somewhere along the lines.

I think the arguments are better made in the public press or in the public discourse as we're doing right now. That get people to realize that this is something of a paradigm shift and a worldview shift that is being pressed by people with an agenda. And the agenda actually goes beyond patents. The agenda goes toward transhumanism and the rest of these things where computers and humans, what's the difference? You hook them together and off we go. That whole worldview, that that would be a better world than the one we have now is really where it's all going. This is just a small step.

Robert J. Marks:

That's very insightful. Okay, well, I'll keep my horses stabled for a while then, I guess.

Richard Stevens:

Just wait for the opportunity. It may arise and you could continue writing on the subject as I am.

Robert J. Marks:

Okay. Yeah, that's right. That's right. I think that is, what do they call that? The court of public opinion or something like that. So that's where it needs to be vetted.

There are three types of intellectual property which are protected by the US Constitution, and Richard will correct me if I'm wrong. I believe they're trademarks, copyrights, and patents. Is that right, Richard?

Richard Stevens:

Patents and copyright are. I don't believe trademark is actually in the Constitution, but it was part of the common law.

Robert J. Marks:

Okay. But currently it is protected by federal law. Right?

Richard Stevens:

Yeah. I can explain more about that if you want. It's actually-

Robert J. Marks:

Yeah, let's talk about it because I want to cross the line into copyrights versus patents.

Richard Stevens:

So let's talk about the trademark so we know we're not going to talk about that anymore. No, but a trademark, again, I think we mentioned it in one of the earlier podcasts, but a trademark is basically either a series of words or some kind of a design, a graphic design, something like that, that identifies a

business. It's what it does. It identifies the business. And when I say business, that means anybody. It could be an individual, but still, it identifies them. So as we talked about before, the Coca-Cola symbol, very famous, you can't miss it, or the Walt Disney signature. These are all trademarks. They're not copyrighted. They're trademarks because they identify the business. They identify who is branding this product or what the source of the product or service is. So that's what trademark is. That's been protected outside of the Constitution in the common law for the longest time.

Robert J. Marks:

But it is the US patent and Trademark office. So they're considered together.

Richard Stevens:

Okay. It is. So here's what people need to know about how it distinguishes trademark from the other two. You don't get a trademark from the government. You get protection for your use of a trademark and what the government does, whether it's in the states, and I think all states have it, all the states I know about do, and the federal government is a registry. So when you apply for a trademark, you're not getting a trademark. You're registering it because the questions in trademark have to do with, hey, you're using my trademark to market your business. No fair. And because it will confuse the user, or they'll think that I'm the one who made it when I didn't. Those kinds of questions. So it has to do with identity and source of products.

So you can actually have a trademark. For example, in Arizona where I live under the state and the next state over, somebody could use the exact same formulation. So long as our businesses don't overlap and they don't cause some user confusion or they affect a competition in some way where people will buy his product instead of mine because they think it's for me or that I've endorsed it or something like that.

Robert J. Marks:

Now you say overlap. Does that mean geographically or in terms of topic?

Richard Stevens:

It can be both. It can be both. For example, if I have a service here and I've created a service mark or a trademark for it, and I have it on my truck and I drive around with it, and people come to know me for that, that's how trademarks are created, is people come to know you. Now, I register it with the state, well, that means in the state, you're protected against somebody using it. Now, somebody in Massachusetts uses the exact same trademark, but maybe for a different service. Well, there's no confusion. Nobody's confused by it. They can use that without any problem.

Now, the federal registration of a trademark, the object of the game there is to allow people to get a federal recognition that, hey, I'm going to use this trademark nationally, not have to litigate state to state, nationally. But still, it's a registration. And in fact, if a person doesn't use a trademark for a certain number of years, depending on the situation, it's all litigatable. But if you haven't used a trademark for many, many years and someone else starts using it or something very close to it, the new person may have the right to use it because you haven't used it for a long, long time.

Robert J. Marks:

Yeah, I've heard, I think it's an abandoned trademark, is something like thermos bottle. It used to be trademarked, and now it's a generic term.

Richard Stevens:

No, that's not abandoned. What happened was in common use, just like Kleenex, it became in common use so much so that the courts would not enforce it because everybody used it now as the generic description, just like you say, it's a generic description of the product, not referring anymore to the source or manufacturer.

Robert J. Marks:

Then parts of the country, if you ordered a Coke, that just means a soft drink. And I heard about Coca-Cola at one time going around through different restaurants and saying, "Can I have a Coke?" And they brought them a Pepsi and they said, "No."

Richard Stevens:

That's right.

Robert J. Marks:

"I wanted a Coke." And they did this in order to protect their trademark.

Richard Stevens:

Exactly. And they still have. They still do that. So if you-

Robert J. Marks:

Do they?

Richard Stevens:

Yeah. I don't know what Coca-Cola company does, but I know that every restaurant I've gone to, restaurant bar, you name it, if you ask for a Coke, they'll say, "Is Pepsi okay?"

Robert J. Marks:

Got you.

Richard Stevens:

Because they're not going to get stuck by that and say, "Wait a second." And it's not just the law, but it's also the identity of the product. People sometimes want Coca-Cola. Others just want a soft drink or a cola of any sort.

Robert J. Marks:

I've seen a map of the United States of where they referred to soft drinks as a soda, coke and pop.

Richard Stevens:

Right. That's so fun. I love that stuff.

Robert J. Marks:

It is a geographical thing. I have also heard, Richard, that all the trademarks in the world exceed the value of all the patents. I don't know how they figured that out, but I do know that there's lots of

litigation. One that I remember is Cracker Barrel. There was a litigation between the craft Cracker Barrel cheese and the Cracker Barrel restaurants, and they battled it out. I forget who won. I think that they came to some agreement, but I'm sure a lot of money was used to protect that copyright.

Richard Stevens:

Well, it is a worthwhile thing. So I think we've helped the listener now know what a trademark is, so we can go back and talk about the other two, realizing that they're different.

Robert J. Marks:

Okay. Patents versus copyrights.

Richard Stevens:

Oh, sure. So a patent is a legal protection for a right that arises for an inventor who came up with something that was new, useful and non-obvious. And so for a utility patent, for example, the most common kind that people think about, it's a thing. It's something that's been built. It can be built by somebody else. It's a device. There's different kinds. There are also various... There's software patents. You can have all these various things, but it's something that does something. That's what the utility part of that is. It's useful. It does something.

Distinguish that from copyright. Copyright protects a written word, music and visual representations, a few other things, but it's mainly that. So for example, if you take a picture of something, you immediately own the copyright, by the way. You don't need the government to recognize it. You actually have the legal right to copyright to a photo that you've taken or an article you've written. You immediately own it under the law, the way the law reads. But that's protecting words. And in the case of copyright, what you're protecting is the expression of words. So it's the turn of phrase. It's not the information content, it's how it's written. And a picture is the same way. A picture is a picture. You take a picture of a certain sort. Like for example, I wrote an article for Mind Matters, and you kindly let me use one of your photographs.

Robert J. Marks:

Oh, that's right. My fetching wife.

Richard Stevens:

Your fetching wife. And you were in it too.

Robert J. Marks:

Yes, I was.

Richard Stevens:

Which didn't ruin it. Anyway.

Robert J. Marks:

Yes, it did.

Richard Stevens:

But seriously, but I had to ask you. You had to offer, if I'd had the photo already, I would've come to you and said, "May I use this online?" Because otherwise I'd be infringing your copyright, which is your exclusive right to use your photograph. So photos and sculptures and music and written word are all in the copyright. And so you can see they don't have utility like a machine does or a design does or something like that.

Robert J. Marks:

I one time copyrighted some songs I wrote, and it was so easy. I think I could just put random dots on a sheet of paper with musical notation, send it into the copyright office, and they would copyright it even though it was just gibberish. They certainly don't test for the intellectual content of what they copyright.

Richard Stevens:

That's correct. They don't.

Robert J. Marks:

Which is really fascinating. Well, let me offer the following situation. Let's get back to AI. And we have discussed patents already, but patents are like copyrights in the sense that you own the copyright and it gives you a license to sue if anybody violates your intellectual property. Now, I have always said that artificial intelligence is a tool, and I can see some of these great artificial intelligence software things coming out as tools in the design of stuff. There was a recent case, a guy named Jason Allen. He entered a piece that was generated by artificial intelligence called Theater de Opera Spatial, and he took home the first place prize at the Colorado State Fair's fine art competition of the category of digital arts/digitally manipulated photography. The art was generated using AI. Now, the copyright office, just like the patent office says anything you copyright has to have a creative source as a human being. In other words, you cannot list an AI as the source of the copyrightable material. Is that true?

Richard Stevens:

I haven't looked that up. That's a good question. I suspect that is true though, because of the nature of how copyrights work. I've never seen it litigated, but then I haven't wanted to.

Robert J. Marks:

Yeah. One of the interesting things is that OpenAI was giving this really incredible computer program named DALL·E. They made it public and they said, "Look, if you generate art using our software, go ahead and use it. We're not going to copyright it." Now, they were trying to be great and tell the world how great they are, but I think it was already prohibited by the copyright office. So I don't think they were doing anything. It was all a manipulation.

Richard Stevens:

Depends. Depends. It depends how it was set up. But certainly, the fact that a machine creates a piece of work, as you say it's AI is a tool, artificial intelligence is basically computer hardware and software. It's a tool that makes stuff the same as your camera makes something, same as your piano makes something. In that sense, the tool is making the sound. Now, how do you protect what it is? So in the case of music and sculpture and photos and words, that would be copyright, and they don't look at the content.

The issue in copyright is you've got whatever the specimen is, for example, a photograph and or a drawing, maybe this AI system created a drawing. So you've got a drawing in your hand and you say, "Okay, did you create that drawing?" And the answer is, "Yeah, I did." And so that's fine. That's all they care. You say you created it and you say like a license to sue. Well, what happens is somebody else two years ago created that very same thing. By some means, whatever means it is. Exact same thing. And they say, "Hey, wait a minute, you copied my work." That's the copyright question. You copied it. And then the litigation is about whether you copied it or not, or whether it was independently created. The famous litigation with George Harrison, the ex-president at the time with, My sweet Lord.

Robert J. Marks:

And He's So Fine.

Richard Stevens:

And He's So Fine by the, was it Van-Dell's? Anyway, so the group before that had a very similar musical line. If you listen to the two, you go, wow. Yeah, there is some similarity there.

Robert J. Marks:

It's amazing. Yes.

Richard Stevens:

So the question was in litigation, did George Harrison copy it or did he independently come up with it because it's possible to independently come up with things of this sort?

Robert J. Marks:

Yes. Yeah, it certainly is. And there's other ones too. I think that The Doors had, well, Hello, I Love You. And the Kinks had All Day And All Of The Night, and the chords were exactly the same, and the Kinks sued The Doors, and I believe they won.

Richard Stevens:

I'm not sure about that. Maybe they settled out of court because they're still playing the song, so I don't know.

Robert J. Marks:

Oh yeah, that's true. Or I think with My Sweet Lord by George Harrison, they just said that a percentage of the royalties had to be paid to the original writer.

Richard Stevens:

But you see, that's the issue in copyright is, like you say, license to sue is a right to sue. We shouldn't use a term of art. But the right to sue is in the hands of the person who's claiming infringement and they have to show the, "Hey, wait, I did this first and you copied it." And there's different ways of proving that. I've litigated several of those and it's interesting work, but that's what you have to prove.

Robert J. Marks:

I inadvertently at one time used an image which was copyrighted, and I was contacted by the copyright owner that threatened to sue. And I found out looking at the copyright laws, they are terrible, if you

lose. I think it was Sonny Bono, the Sonny Bono laws that came into effect when Sonny Bono was of Sonny and Cher. He was a pop songwriter who was elected to Congress and he wanted to make big bucks on his songs. And he put this into effect. And if you lose, if somebody says you violated copyright and you lose, you have to pay all their attorney's fees. It's just terrible.

Richard Stevens:

And there's liquidated damages and the rest. And before you get terrified by the copyright law though, it's always good to talk to somebody who practices copyright law, a lawyer who works in that area, because there are things that can be done that makes it tougher for the other side to say you actually did something wrong. There's also an ongoing series of scams, Bob, I don't know if you're aware of it, where people will send these demand letters and they look like they're coming from law firms or collection agencies and that thing, and they say, "Hey, we've detected that on your website, you're carrying a photograph of... And we represent the rights holder and you owe us a thousand bucks."

Robert J. Marks:

Yes.

Richard Stevens:

Take a minute before you just write back with your check. It may well be that it's actually a scam. And a lot of people are terrified by the law, so they just write the check and hope it goes away. But there can be legitimate legal defenses, and/or the person who's making this claim against you could be totally bogus and not have the right to sue.

Robert J. Marks:

That's really good to know. I've been much more careful. I only take the Wikipedia images these days, which are for common use.

Richard Stevens:

Yeah. It's a Wiki Commons, I think, or Wikimedia, whatever. Yeah,

Robert J. Marks:

Exactly. Well, I want to get back to Jason Allen. Now, he did this award-winning thing where he submitted a painting that was made by artificial intelligence. It was art that won the first prize at this Colorado State Fair. Now, initially I would say this is not copyrightable because he used an AI program to generate the art and but Allen did something different. He said, "I made the prompt to the AI program. I fine-tuned it for many weeks, curating all of the images." He claimed to have gone through over 900 iterations before the final submission, and this is a lot of iterations. I talk about Formula 409, which is named because it took 409 iterations before they perfected the formula, or WD-40, which took 40 iterations before they perfected the formula. But this guy took 900 iterations.

Now, it seems to me, and I'd like your opinion on this, it seems to me that Allen was using the AI as a tool. He wasn't using the output of the AI, but he was using the AI as a tool in the generation of this art. As such, it seems to me that Alan should be granted a copyright. And if the answer to that is yes, then how in the heck do you document when you apply for a copyright that you iterated? And this was not just the outcome of a single pass through artificial intelligence.

Richard Stevens:

All right. Well, you mentioned earlier that applying for a copyright is easy. It is. It's a one-page form, unless it's changed lately. And all you do is say, "I created it. This is the date I created it. Here's my address, and here's an attachment of what it is." If either it's a book or a music score or a photograph or a photograph of a drawing, for example, I don't know enough about the case to know why Jason Allen, as we might say, made a federal case out of it.

Robert J. Marks:

Oh no, he didn't make a federal case. He's just defending against the idea that he just submitted an AI thing. He said, "No, I used it as a tool for a number of iterations."

Richard Stevens:

Okay. So if we're talking about the people who are judging a contest for art, and if they have some specialized rules for themselves, that's one thing. But if I'm looking at the copyright office, I'm looking at submitting that and sending it in, and I don't tell them how I came up with it or how many iterations there were. I never would do that. It's never called for in the application, and there's no reason to add that info. So if you wanted an actual federal copyright, you would submit the work. They don't know how many drafts and you and I write articles for a living, I've copyrighted several just because I want people to know I came up with the idea first anyway, and I don't send them the earlier drafts. Why would I?? Because the final one is the one that I care about, and that holds the expression of ideas that I wanted to do. And similarly with songs and the rest. So it doesn't matter how many different variations you went through.

So that's why I'm saying the notion of describing that the computer did it or that it took this many iterations is not part of the application process of the copyright office unless you somehow want to make an issue out of it.

Robert J. Marks:

I see. Well, what if it went to litigation and somebody says, "This is the type of painting, or this is the type of art that would come out from an artificial intelligence." I guess you would have to put the artist on the stand and get in some sort of deposition that he did a bunch of iterations in order to dismiss the case.

Richard Stevens:

Well, you mean to advance it?

Robert J. Marks:

Yeah, to advance it.

Richard Stevens:

But in any event, whichever side you're on, yeah. But in any event, well, again, though the plaintiff in a copyright action is not going to challenge how you made it. The plaintiff in a copyright action is going to say, "Hey, I made that already and you copied it." That's the case.

Robert J. Marks:

I see.

Richard Stevens:

And a defense to that might be maybe the Jason Allen defense is, I didn't copy your thing. Here's how I did it. And then I ran my computer and I generated all these things, and I liked the one I liked, and this is the one I published. And then someone says, "Well, wait a minute, you didn't actually do it." And then he hires you as an expert witness who testifies and said, "No, Jason put in the parameters. He wrote the software, or he bought the software and has the rights to its output. He put in the parameters. This is what kind of thing he was looking for. And it's his expression that when he chose this one for publication, it embodies his expression using a tool."

Robert J. Marks:

So does this take any teeth out of the ruling that that art generated by artificial intelligence is not copyrightable, which is the current standing of the copyright office?

Richard Stevens:

Well, so don't tell them.

Robert J. Marks:

It seems to me that that's hard to defend. It's easy to game.

Richard Stevens:

So yes, I would think it was easy game. If you bring it up as part of your application, you're going to have a problem. And if indeed that's all you've done, is generated 10,000 different images, all of this various sort, and somebody else has come up with it first and you say, "I did it myself and it was independent, it was a computer that did it." Well, maybe that's where the gray area line is drawn. The copyright office is going to let people just make infinite numbers of photographs and say, "Hey, well my computer did it." So that may be a much more of a practical application thought process. It's one of the things in the court system in general is that they don't like to have to keep re-deciding cases that are just generated thousands of them. That's why we have class action lawsuits, for example, you don't want 10,000 plaintiffs. You want one plaintiff. So the same thing would be here, you just can't make a million photographs and one of them matches and say, "Well, I didn't copy it. I used the computer." They don't want to mess with that.

Robert J. Marks:

I see. Okay. So you can game it. In your Mind Matters News article, Can a Robot Hold a Patent? We're going to provide a link for that in the podcast notes, you referenced the book, Ryan Abbott, the Reasonable Robot Artificial Intelligence and The Law. I must admit I haven't read it, but one of the things Abbott says, and you quote, "Human inventors are widely augmented by AI." And so this goes back to the idea that AI is primarily a tool that is going to be used in human inventions. So in general though, for that book, what's your synopsis of the book, the Ryan Abbott book?

Richard Stevens:

Well, his thesis, his point is that there has to be a general principle that AI has legal neutrality with respect to humans under the law. So that AI, again, here we go again. What does AI mean? Well, we'll set that aside for a second.

Robert J. Marks:

And also, what does legal neutrality mean?

Richard Stevens:

Exactly.

Robert J. Marks:

I don't know what that means.

Richard Stevens:

Exactly right. But first you say, who are you talking about when you say AI? What does that actually mean? And then is entitled to or should be treated with legal neutrality. So AI, notwithstanding the attempts to confuse it, is hardware and software. It's a hardware that's running software. All that's created by human beings and runs by human beings and is input parameters by human beings and output is generated to human beings. All right? Now that's what AI is. So when he says, the author says that AI should have legal neutrality, what he's really trying to say is there shouldn't be special treatment for things that result from AI. That's actually what he means. And I read the book and that's actually what he means. And he does not advocate, for example, that AI hardware software systems should have rights themselves or that they have legal personhood, that they somehow should be persons.

And he skirts around it, but he doesn't really come out and say that AI should be held morally responsible for anything. So he says, "Not really." So he does lean in the side of saying AI is a tool. At the same time elsewhere in his book, he says that AI has created numerous independent inventions all by itself, which is false, but he says that. So one isn't really sure what the bottom line of all of his thinking is, but this notion of legal neutrality means that if an autonomous vehicle that runs by AI gets in an accident, it should be treated the same. The situation should be treated the same as if a person were driving the vehicle.

Robert J. Marks:

I see.

Richard Stevens:

You don't say, well, it's AI, we'll treat it differently. No, he wants it to be treated the same. Now the same isn't easy, that it's not an easy concept, and we could spend hours talking about how that would play out in different ways. Similarly, with criminal misconduct, if there's some sort of a violent crime caused or harm caused by an AI-driven machine, you say, "Well, we're going to treat that the same as a human." Really? What does that mean? See, you're going to treat it the same, but you can't. You're not going to jail the computer. Back in the ancient days in England, they actually would punish animals and punish devices that caused harm. Literally, they did that, but it doesn't make much sense to put AlphaGo into prison.

The notion though, actually feeds his other law and economics and social policy viewpoint where he wants to try to encourage AI systems to basically relieve humanity from having to work. And that's a whole other thing. But he starts here with, well, anything that's caused by AI should be treated as though a human had done it. And then lets you figure out in the individual cases with his guidance, how you would actually do that.

Robert J. Marks:

One of the quotes he said that I did like, if a person owns a machine... And I'm quoting here, "If a person owns a machine that produces property, then he would own that property, whether it was a loaf of bread or a trade secret." I like this example because it says you can have a bread-making machine, and if you add the proper ingredients to the bread-making machine to make your own novel type of bread, that's like taking AI software and choosing the inputs to the AI software to generate the painting. And just like the AI software should not be given rights, the bread-making machine shouldn't be given rights. And if you give rights to one, you have to give it to the other.

Richard Stevens:

Yes.

Robert J. Marks:

Which is ridiculous.

Richard Stevens:

And that's where the author of the book, I think is correct and makes a lot of sense. And that's why I say it's interesting the way the book meanders around some of these ideas. But on that point, he says multiple times, and I think you and I and he agree that the AI system, hardware, software programmed and input by humans is a tool. It's a machine. People have said, "Oh my gosh, look at Big Blue. It's so smart. It was able to beat Kasparov in chess and it's really smart." And I said, "Yeah, and a big earth mover is really powerful because it can beat me when I have one shovel." But no one says the big earth mover. And some of them are giant, they can do so much, but they're still machines. They're just machines like a shovel and somebody has to drive it, build it, and do all the things that are involved with deploying a machine to solve a human problem. So yeah, Big Blue beat Kasparov because the programmers knew how to write software that could beat Kasparov.

Robert J. Marks:

Isn't that true of all tools? All tools just help an extension of human capabilities.

Richard Stevens:

Yes, and truly nothing else. And understanding how software works, which is one of the areas that I like to write about, and I know you do, is software is really sophisticated sometimes, but it's human thinking put into symbolic form.

Robert J. Marks:

Yes. And all of the intellectual creativity comes from the human being.

Richard Stevens:

Every bit of it.

Robert J. Marks:

Yes. Great. Thank you, Richard. We've been talking to attorney and author Richard W. Stevens, and I really appreciate our chat, Richard. I learned a lot and it was fun.

Richard Stevens:

Love the subject. Thank you, Bob.

Robert J. Marks:

Okay. So until next time on Mind Matters News, be of good Cheer.

Announcer:

This has been Mind Matters News with your host, Robert J. Marks, explore more at mindmatters.ai. That's mindmatters.ai. Mind Matters News is directed and edited by Austin Egbert. The opinions expressed on this program are solely those of the speakers. Mind Matters News is produced and copyrighted by the Walter Bradley Center for Natural and Artificial Intelligence at Discovery Institute.