

Web3: Embracing Possibilities and Navigating Legal Risks

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Summary

- Web3 is here, it's evolving around us, and it's already changing the way your clients do business.
- Attorneys must embrace the tech and prepare for new risks. Lawyers need to learn what's out there now, be curious about what's coming and influence the way new technology frameworks are designed.
- Web3 technologies offer incredible potential for those willing to brave the risks. So why not lead the way in harnessing the potential of Web3 alongside our clients?



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If someone tells you that Web3 is coming and that it will change everything, feel free to contradict them. Web3 is here, it's evolving around us, and it's already changing the way your clients do business. Attorneys must embrace the tech and prepare for new risks. We need to learn what's out there now, be curious about what's coming and influence the way new technology frameworks are designed. To serve as effective counselors in this area, we must either rely on experts or become the experts. Every expert begins as a novice, and because the technology landscape is changing so rapidly, today's expert is sure to become tomorrow's novice. In this article, you'll learn how Web3 is emerging, some of the components we can experience now and why you should be paying attention to what happens next.

What Is Web3?

By the time you read this article, there will be new, and perhaps drastic, jumps forward in the way we experience and define the newest iteration of the web. Trying to define Web3 in the current moment is like trying to hit a moving target—

from inside the target. Things are evolving quickly, and predictability is elusive.

Web3 development is being driven by changing user behavior, preference and demand. The World Wide Web is the foundational layer for how the internet is used, and you may already be using it for Web3 applications without realizing it. We are like the proverbial fish who do not comprehend what water is because they are immersed in it.

While the precise definition is evolving, and thus perishable, there are a few big concepts and components that resonate with Web3 developers and aficionados:

- 1 decentralized and blockchain-based applications;
- 2 use of virtual and mixed reality applications;
- 3 machine learning and artificial intelligence (AI); and
- 4 the development of a semantic web (sometimes differentiated as an independent concept).

A Brief History

How did we get here? What version of the internet are we using right now?

Web1 consists of simple, text-based websites with limited functionality and no dynamic content. These static or “readonly” sites are characterized by a user’s quest to gather information. We haven’t abandoned Web1. Millions of Web1 sites are still in use, and new sites are being built daily. Some examples are websites that describe a business and provide some basic contact information to visitors, with no space for dynamic interaction. Or those digital encyclopedia articles that kids in the 1990s used to research their school reports.

The term “Web1” was not coined until the need for it arose in the early 2000s. People needed an updated vocabulary to emphasize the changes that interaction and user-created content were having on the web.

Web2 is often referred to as the social internet, or the platform economy. It consists of sites that are driven by interaction and characterized by user-generated content. Social media applications and virtual marketplaces that emphasize user reviews are examples of Web2. For most Web2 applications, profitability is driven by popularity and the presence of high volumes of users. The business focus is to encourage interactions between users and host content from multiple-user sources, which further increases user engagement with the site or service.

When traffic is high, marketing and ad revenue follow. In Web2, if you're not paying for a service, there's a good chance that you are the product. These sites gather and analyze patterns in your behavior to sell more targeted ad space and market to you more impactfully.

There were several evolutionary jumps that led us from a static, encyclopedia-type web to interactive sites that changed the way we dealt with information, data and each other. Consider sites like Wikipedia, where knowledge is constantly updated and vetted from a broad base of users. Or sites like Amazon that allow us to drive the global economy with our consumer behavior from anywhere we have access to our smartphones. Social media sites like Twitter, Instagram, LinkedIn and Facebook illustrate how Web2 sites can result in massive advertising revenue for providers. And in Web2, power and market share have tended to centralize around a few large-scale technology companies.

Web3 will move toward decentralization, data privacy and user ownership of the content they create. It will be characterized by emerging decentralization, AI, blockchain, virtual reality and semantic markup technologies. Web3 represents a shift toward a more user-centric internet, and the integration of emerging technologies plays a significant role in enabling this vision. The aim of integrating these technologies is to enhance the structure of the web by providing more security, transparency and user control. This integration will also drive innovation in decentralized applications and services.

It took decades to transition from readonly websites to our current iteration of interactive social media, shopping and communication applications. But this does not mean that Web3 is decades away. Users are gravitating to more immersive

and automated internet experiences. And the term “Web3” is getting increased attention because, much like in the early 2000s, we need a new vocabulary to illustrate the way that technology is changing.

We’ve been moving toward Web3 since the moment we defined Web2. Today, we’re seeing extensive use of Web3 components and technologies. A rapidly growing volume of web domains contain semantic markup, which is comprised of tags that enable machines to identify and organize a website’s components and structure. Maybe we haven’t fully arrived at the next iteration of the web, but by the time we get there, we’ll be searching for a way to define Web4. And as usual, the journey will be fraught with legal peril.

Decentralization and Blockchain

While Web2 is controlled by a few large technology companies, Web3 is characterized by decentralized technologies, such as blockchain. The hope is that decentralized protocols for file storage, identity systems and marketplaces will create an infrastructure that is more resistant to control and censorship.

Many attorneys have been lulled into a false sense of security when it comes to the relevance of blockchain technology, but you should be wary of this trap. It’s true that interest in the cryptocurrency market has waned and that the market is still considered highly volatile. There has been a very public showing of well-known figures coping with the financial fallout of that market volatility. Keep in mind that cryptocurrency is just one of many ways blockchain can be utilized.

Web3 is more than just crypto, and it’s more than just blockchain. With that said, we’ve only scratched the surface of what blockchain can do. Deregulated economic structures are not the only use case—they’re just the one getting the most media attention. The uses for blockchain technology are evolving beyond decentralized finance.

Blockchain is a digital ledger used to record transactions in a secure, tamper-proof and transparent manner. Each recorded transaction is linked to the previous one, to form a chain that details the history. This chain is stored on multiple computers,

creating a distributed database that can be accessed by all members of the network.

Blockchain technology can be leveraged to create smart contracts; store non-fungible tokens (NFTs); keep voting systems secure; track product movements, increase efficiency in supply chains; and securely store and manage digital identity information and medical records.

These are just a few examples. There are legal challenges that attorneys need to weigh carefully when blockchain technologies are in play. Decentralized applications are designed to be difficult to regulate, which may prove problematic. And the nature of blockchain's distributed ledger raises questions about whether sensitive information is truly private and protected. One of the key principles of the European Union's General Data Protection Regulation is the right of individuals to have their personal data erased. With blockchain, data is stored in a manner that makes this nearly impossible. These are just a few examples of the legal issues we've identified at this point; the true challenge will be spotting the risks in real time, as the technology continues to develop.

Machine Learning and Artificial Intelligence

AI applications have enjoyed rapid mainstream adoption in Web2, which is rich with predictive algorithms, to drive ad revenue. And the legal industry has been eager to reap the benefits as well. In electronic discovery, there has been wide-scale adoption of AI and predictive algorithms to help prioritize the review of relevant content in large data sets. Legal client relationship management applications frequently leverage AI for insights. AI drafting tools and research chatbots are moving to the forefront of legal practice. Some AI teams have even developed models for predicting the results of imminent litigation matters by using inputs from large volumes of fact patterns and relevant paradigms.

There are several ethics issues to consider if clients are leveraging AI to guide potentially life-altering decisions in areas such as lending, criminal justice, consumer rights, hiring, etc. Predictive algorithms are great for classifying and

sorting large volumes of data, and for predicting outcomes. But when they are used to determine things like who is approved for a loan, unchecked bias in the AI can systematically make decisions that harm protected classes of people disproportionately.

Emerging AI systems will inevitably present new legal risks to navigate, as they are combined with the decentralized concepts that characterize Web3.

For instance, instead of hiring a freelance artist or graphic designer to create commercial images, one could use a Web3 application called Midjourney, one of several popular AI image creation platforms. Midjourney describes its service as “an independent research lab exploring new mediums of thought and expanding the imaginative powers of the human species.” Users are provided access to Midjourney’s AI chatbot via Discord, a decentralized, ad-free communications application that is popular with gamers and Web3 project creators. Once they have access to the Discord server, users can feed the bot descriptive textual command prompts that result in the generation of unique and sometimes otherworldly images for continued development.

If an AI service relying on a decentralized communications app isn’t Web3 enough for you, we can throw another shade of AI into the mix: Users are now finding that ChatGPT can draft effective command prompts, to make the whole process easier.

Midjourney received media attention in September 2022 when a Colorado man used it to make his entry into the Colorado State Fair’s digital art category and won. He spent hours crafting the text prompt that generated the beautiful image and received both positive and negative feedback for the effort. While his use of Midjourney was disclosed, and was not against any rules, it did take more traditional digital artists by surprise, raising questions of fairness.

AI image generators work by considering a vast collection of digitized artworks from the site’s users, alongside another vast array of artwork from artists throughout history. So, who is the real artist—if there is one? Is it the AI? The human, whose ideas guide the AI? The other AI that generated the command prompt, based on the human’s request? Or the human, for generating the

request?

The answer to this question can differ, depending on where you are. While nonhumans do not currently enjoy copyright protections in the United States, an Australian judge recently ruled that AI-created inventions can qualify for patent protection. And in 2021, South Africa allowed such a patent, noting specifically that “the invention was autonomously generated.” In that instance, the person who designed the AI owns the patent, but the AI is listed as the inventor.

Some artists and photographers are beginning to object to software companies creating images derived from their work. Seattle-based Getty Images recently announced a copyright infringement suit against popular image generation site Stable Diffusion, claiming that they copied and processed millions of Getty’s copyright-protected images without seeking the appropriate licenses. (Getty has issued licenses to other platforms that seek images for model training.)

Another lawsuit filed in a U.S. federal court in San Francisco alleges that AI providers Stable Diffusion, Midjourney and DeviantArt all generate AI images that compete with the original artist’s images in the marketplace. The platforms will likely claim fair use of the images to build their databases. But these copyright disputes highlight the tip of the iceberg when it comes to legal challenges that new iterations of AI technologies will face.

Established players are making note of these challenges and building potential solutions for the marketplace. Adobe has launched its own AI image generator, Firefly, which only uses training data from publicly licensed, public domain or Adobe stock images. The intent of this curated training framework is to create content that can be used for commercial purposes without encountering copyright and licensing obstacles. Each image will also be accompanied by a credentials label, indicating that generative AI was used. Whether such images will have a better chance of achieving copyright protection remains to be seen.

Meanwhile, in New York, the Museum of Modern Art has embraced AI image generation by featuring a special installation in the lobby. The piece is called Unsupervised, and the AI model draws its inputs from the museum’s own

collection. The model constantly learns, refreshes and generates appealing animations of reminiscently artistic colors and shapes for patrons to enjoy.

This diversity of reaction to AI-generated art, and the platforms that generate it, illustrates that established legal frameworks may not be sufficient to handle the unique challenges that come to light as new technologies evolve. We may need to rebuild them.

Midjourney's website does not address copyright framework for the art that serves as inputs for its AI. However, the terms of service do explicitly grant rights to the site's users. According to the terms, anyone who uses the service grants it full rights to anything they create. Midjourney asserts that subject to this license, paying users own all assets they create with the service and can use them for commercial purposes. In contrast, nonpaying users receive a license to the assets they create under a Creative Commons Noncommercial 4.0 Attribution International License. Additionally, companies with more than \$1 million a year in gross revenue must purchase a more expensive corporate plan if they plan to use the service or create art to benefit the company.

Midjourney considers itself to be an open community and encourages users to use and remix images and prompts from other users. Keeping all of this in mind, we can anticipate challenges as to whether services like Midjourney have the authority to enforce licensure or grant ownership rights to users under these conditions—especially if an AI-generated prompt was used. This is only one example of how AI technologies are being integrated into the changing internet landscape. There is a sea of other examples to consider. So it's time for the legal industry to dust off our issue-spotting caps and focus on what these new frameworks will mean for our clients.

Virtual and Augmented Reality

The metaverse is no longer a distant dream. Virtual and augmented reality are already changing the way people work. Attorneys should be paying attention to how clients are using virtual reality (VR) now. We need to know how it works, and

we'll likely need to jump in there ourselves.

It's estimated that over 64 million Americans used VR in 2022. Globally, this number balloons to over 171 million people. The need for advanced collaboration tools is increasing, and innovative VR technology is snowballing to keep up with demand. Headsets and other VR components are being designed for enhanced long-term comfort and professional use, and the introduction of mixed reality features and productivity applications are expected to drive adoption even further. While VR applications are exciting, they are also accompanied by risks and data privacy implications.

Virtual gaming can be an incredible experience, with virtual environments evolving into comfortable, beautiful and highly interactive spaces. The capacity to trigger wonder, awe, exploration and collaboration with immersive environments is off the charts, and developers of these environments are limited by little more than their imaginations. The video game industry is poised to see further expansion and additional market disruption. And all the usual business and legal challenges will follow—with some new ones sprinkled in for fun.

This might lead you to guess that VR fans are entirely focused on gaming, but you'd be wrong. So how are your clients using VR? They're using VR for meetings, and to work on both solo and collaborative work projects. They're using it to work out, and to track their heart rates and other relevant biometrics while they work out. They're crafting custom virtual environments to spend time in. And yes, they're playing games. And we can only guess at what they'll be doing tomorrow.

VR is also developing in ways that make it easier to interact with each other in the metaverse. You may be looking into the eyes of an avatar, but the increasing popularity of inward-facing headset cameras means that you may be looking at someone's actual expression under their headset, complete with facial mapping, expression tracking and eye movement mimicry. The fact that this kind of technology exists at all raises data privacy questions. We cannot forget that the basic function of VR equipment is to collect, interpret and store user inputs. What other kinds of biometrics and personal data are being recorded, stored and processed? By which apps and devices? How is that data being used? And, who

owns it?

It is important to understand the implications of privacy policies, terms of service and potential data privacy implications before clients use VR. Manufacturers and application providers are typically required to obtain user consent before collecting, using or sharing personal data. But the ownership of personal data collected by VR headsets varies and depends on the specific headset manufacturer's privacy policy and terms of service. The same is true of VR software applications. Some companies may claim ownership of the data, while others may give users control over the data they generate. Manufacturers and applications may also sell or share data with third-party companies.

Clients should carefully consider whether they will allow employees to use VR for business purposes, which applications are permissible for work use and in what contexts. If allowed, the flow of business communications through VR has the potential to change an organization's information governance landscape. Microsoft is currently working on a beta version of Mesh, for Microsoft Teams, which will "enable presence and shared experiences from anywhere—on any device—through mixed reality applications." Mesh is a virtual collaboration and meetings application, and if you have ever collected or processed Microsoft Teams data for e-discovery, you're likely shuddering at this idea.

The potential for this technology is easy to see. We can collaborate in 3D and build things we've never been able to build before. For attorneys, this is bound to be both beautiful and frightening. We have a chance at truly global collaboration, and barriers to entry are shrinking as the technology becomes more affordable. These new spaces also create new opportunities to generate novel data and information, which may be discoverable in legal matters.

New tech means new data types, and the collection, formatting and processing of this data may prove to be a major challenge. It is not unimaginable that data collected from VR might become a common source of evidence in legal proceedings. If your client's team has a collaborative meeting in a virtual space, the recorded data from that meeting may later become relevant to a previously unanticipated legal matter. Clients should consider thorough information

governance protocols to anticipate this eventuality. Implementing a reasonable data retention schedule can help minimize the storage of unnecessary VR records, but such efforts must be undertaken before a legal matter is anticipated. E-discovery software tools will undoubtedly need further development to render these records in a manner that attorneys can make sense of, without having access to the native application. Or they may need to be reviewed using VR for more fulsome context. These records may or may not be reasonably accessible now, but it's likely that they will be in the future.

The Semantic Web

The goal of the semantic web is to make internet data machine-readable and more accessible. It adds structure to the web by using standardized data formats and a common framework of rules, which enables machines to understand the meaning behind the way that data is organized and stored. Via a semantic web, metadata can be filtered, sorted, conceptually clustered and manipulated by machines.

This is accomplished by applying semantic markup to websites. Specific tags can identify different types of content on a webpage, such as headings, paragraphs, lists or other elements. By providing definition and semantic structure to a webpage's content, it becomes easier for search engines to crawl and understand the content, which can result in better and faster search capabilities.

This allows for a more intelligent web, where machines can interpret and process data, making it easier for humans to access and use the information. And, while the building of a fully realized semantic web will admittedly require a massive mainline integration of data formats and labels, a growing volume of web domains contain some kind of semantic markup. This indicates that the work has already started, and the infrastructure is being built as we speak. And with the help of AI, it may not take as long as we think. ChatGPT and other natural language processing tools are ideal for categorization tasks and could speed semantic labeling significantly.

Again, data privacy and security are significant concerns, as the semantic web

relies on the sharing and processing of large volumes of data. Ensuring that this data is protected from unauthorized access is essential. Attorneys should stay informed about the latest developments in the semantic web and be proactive in addressing these challenges, unforeseen though they may be, to ensure that their clients are protected in the rapidly evolving world of Web3.

Web3 technologies offer incredible potential for those willing to brave the risks. So why not lead the way in harnessing the potential of Web3 alongside our clients? If we do, the legal profession can influence technology frameworks for the better, as they're being built.

Since 2012, 40 states have adopted the duty of technology competence set forth by the ABA in Comment 8 to the Model Rules of Professional Conduct 1.1. And, while this Comment does not call upon us to become technology experts, we are going to need a lot of technology experts in the coming years. Before you can become an expert, you must first be a novice. So my advice is to go out and play with the tech. Do it in a way that helps you spot potential issues. It will probably even be fun.

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