To Whom It May Concern:

My response to the various questions in copyright are in italics below. They contain a variety of factual assertions as well as some philosophical observations that are necessary given the scope of the questions posed. My expressions here are copyright-protected, of course.

JPM

COPYRIGHT AND RELATED RIGHTS

Issue 6: Authorship and Ownership

1. **AI applications are capable of producing literary and artistic works autonomously.** This capacity raises major policy questions for the copyright system, which has always been intimately associated with the human creative spirit and with respect and reward for, and the encouragement of, the expression of human creativity. The policy positions adopted in relation to the attribution of copyright to AI-generated works will go to the heart of the social purpose for which the copyright system exists. If AI-generated works were excluded from eligibility for copyright protection, the copyright system would be seen as an instrument for encouraging and favoring the dignity of human creativity over machine creativity. If copyright protection were accorded to AI-generated works, the copyright system would tend to be seen as an instrument favoring the availability for the consumer of the largest number of creative works and of placing an equal value on human and machine creativity. Specifically,

   (i) **Should copyright be attributed to original literary and artistic works that are autonomously generated by AI or should a human creator be required?**

   *We are really asking two questions here. The first is whether copyright could ever be granted to a non-human person, and the second is whether an artificial intelligence engine (A.I.) – of whatever sort – could be employed by a human person such that the resulting creation would be eligible for copyright by that human person.*

   *My answer to the first question is somewhat lengthy, because the philosophical underpinnings are important to the discussion.*

   *As to the first question, it is my position that copyright can only attach to the fixed intellectual emanations of human persons. While it is intriguing to ponder that machines (or code, or other artificial yet independently acting devices) may produce work that is different from work in its genre that has gone before it, this state of affairs is not sufficient for such work to be copyrightable by the A.I. engine or machine. A.I. machines (code, devices, etc.) cannot author work, for the simple reason that they possess no inherent
intellectual or emotional investment in it. They are not stakeholders in the work. Unlike humans, who by the sweat of their brows, and the crest of their imaginations, create work of which they are sapient and aware, and for whose specific expression they labor, A.I. machines may create output, but do not “know” that they have created work in the first place. They “create” material without the slightest idea as to the purposes to which it may be put, its relationship to other works, or how it might reveal the nature, thoughts or feelings that would be evidence of true authorship. In short, A.I. neither knows nor cares that it has created work, however clever or pleasing such work may be to others. Moreover, it is paradoxical that something adjudged “good” by human standards should be the product of something that is not human, and who has no stake in human affairs. Such a paradox cannot stand; it is a kind of counterfeit, analogous to a perfect recreation of a dollar bill that is yet not money.

I am often countered in this belief by people who claim that AI engines are capable of real work, of “exceeding their programming.” That is, A.I. is able to create works (graphical, textual, musical, etc.) that are more than the building blocks in their programming from which they began. “Is this not truly creative? These machines have created unique works,” such individuals say. But this is really not a very important point; I do not deny that A.I. emanations are unique; I argue that they do not represent an intellectual or emotional investment on the part of the A.I. machine. It does not “care” that it has created the work. The work does not represent the A.I. engine’s thoughts, feelings or aspirations, such that it would feel the need to uniquely protect them if they were claimed by another. The importance of authorship as the expression of a human person’s thoughts and emotions is the essence of the “droit moral,” which, while only represented in a limited way in the USA by the Visual Artists Copyright Act, has considerably more puissance elsewhere, especially in France and Japan.

Notwithstanding all this, another problem for those who suggest that A.I. engines should be able to own copyright is the fact that the programming utilized in the creation of artificial intelligence is itself copyrightable. So, it is difficult to imagine that something which is itself copyrightable would be allowed to “hold” a copyright. At this time, human DNA is not copyrightable and people are not copyrightable. But artificial intelligence software IS copyrightable, and highly profitable. So that is yet another fact that augurs against A.I. copyright.

Of course, a number of well-known and distinguished scientists and philosophers have asked the question, What if A.I. is, in some senses, capable of consciousness, as some observers, including Stephen Hawking and Ray Kurzweil, have attested? They warn of a coming “singularity,” an event after which A.I. will become self-aware (if it is not already so), and compete with its human masters. If A.I. becomes self-aware, wouldn’t that permit it to hold copyright?

Against this, I would say that along with a number of other scholars, I take the Searlean position on A.I., after philosopher John Searle. Searle argued that “strong A.I.,” that is A.I. that is truly self-aware, (an awareness that I argue is a linchpin for true eligibility for copyright) may not ever be able to be demonstrated because of what he calls the Chinese Room Problem.

“Searle imagines himself alone in a room following a computer program for responding to Chinese characters slipped under the door. Searle understands nothing of Chinese, and yet, by following the program for manipulating symbols and numerals just as a computer
does, he produces appropriate strings of Chinese characters that fool those outside into thinking there is a Chinese speaker in the room. The narrow conclusion of the argument is that programming a digital computer may make it appear to understand language but does not produce real understanding...Searle argues that the thought experiment underscores the fact that computers merely use syntactic rules to manipulate symbol strings, but have no understanding of meaning or semantics.” So what Searle is getting at is the following syllogism:

1. If Strong A.I. is true, then there is a program for Chinese such that if any computing system runs that program, that system thereby comes to understand Chinese.

2. I could run a program for Chinese without thereby coming to understand Chinese.

3. Therefore Strong A.I. is false.¹

So, if Strong A.I. is false (or unattainable, or not reliably recognizable) then we can hardly accord it legitimacy as a holder of copyright.

Earlier, I stated that originality is not the only thing essential for copyright to exist. Something more is needed. A way to become more certain of this is to inquire into the nature of originality. Some artists create work that is highly regular, that is created according to rules and well-established guidelines, yet is unique because it rises above these guidelines, even as it begins by abiding by them. Excellent examples of this include Rembrandt and Mozart. Each of these artists took an encyclopedic knowledge of pure craft and created original works that while they were created via techniques that were highly recognizable and regular, were nonetheless sublime because of their creativity. If either of these artists were alive today, their work would naturally be eligible for copyright.

When A.I. is used to create artistic “works,” (what I would call “output) what results is often highly intelligible, regular and representative of works that have gone before. Indeed, contemporary A.I. has “created” what have been called the “new masterpieces” of Rembrandt and Mozart, by having the A.I. programming follow the rules that these masters followed themselves. Yet A.I. could as easily be used to create abstract expression, but for reasons I state below, such “work” is not as convincing to the public.

Artists on the freer side of the rules spectrum, whether musical, textual or graphical, create works that dispense with many of the regulations of creation. Jackson Pollock, for example, created a number of noted paintings that seem to be random splashings of paint upon canvas. But because such works were, from considerable external evidence, the true outpourings of thoughts and feelings of Mr. Pollock, these are considered unique, and not merely random, and are thus copyrightable. No doubt, certain critics have had negative opinions as to their value and worth in the art world, but others have maintained that they are important works. Mr. Pollock was in part creating such works in opposition to work by others that he no doubt felt was stultified and dull. He sought to be free of artificial rules and thus to create with abandon. He took a position, abstract though it may be, and this position was reflected in his work. The work reflected him in some way as a human person. Copyright recognizes the expression of Mr. Pollock’s opinions, thoughts and

feelings through his paintings, and his stakeholder interest, both artistic and financial, in them.

Another thing human artists do to create a work subject to copyright is to do something that A.I. machines cannot do; they winnow and choose their work, editing and revising and subjecting their work to the dictates of their changing thoughts and feelings. This growth happens both between works, and also within the works themselves. Artists and writers often work on their pieces for considerable periods of time, perfecting and shaping them, and creating a work of finality. This is because the artist is interacting with the work; the work is an emanation of his changing thoughts and feelings. An A.I. machine could certainly randomly splash paint upon a canvas, but the A.I. device that did this would have no internal reaction either to the “work” it had created, its relationship to other, similar works, or its place in the artistic universe. A.I. does not, and cannot know, whether what it creates is “good,” or “final.” It does not self-react to its own creation. It can create no favorites for itself of the so-called works that it creates. It cannot prefer or disfavor any work that it creates. And that means that it cannot grow as an artist, because it is not an artist.

The reason some of us are tantalized by the possibility that A.I. engines might actually be creating real work is that what is rendered by them looks a great deal like actual creativity. It is almost always intelligible to us. But consider: If A.I. machines were programmed to create work that was more similar to Jackson Pollock, for example, or the atonal composer John Cage, would we be so inclined to remark on how “individual” it was? I would say not. I note with interest that whenever someone points to the “creative” output of A.I., the “wow” factor is almost always due to the fact that the work is easily comprehensible to human observers. An A.I. painting can “look like” Rembrandt; an A.I. musical piece can “sound like” the Beatles. However, computers that create abstract art don’t get people as excited; this is because they are not certain that the output is not random.

By way of analogy, a good counterfeiter can always create bogus bills that don’t look anything like real money (much as abstract art doesn’t look like anything real), but what a counterfeiter wants to do is to create something that looks real, but isn’t. He or she is trying to create a perfect copy of something real – in this case, money. The bogus bill looks and feels like money, but it isn’t. And this is what I argue that A.I. engines do; they create something that looks and feels like art, but isn’t. And if it isn’t art, if it is not representative of the free speech, thoughts, ideas and opinions of a real person, and it isn’t eligible for copyright.

Here is another analogy: Think back to the recent past and answering machines. For fun, some people, instead of recording a standard outgoing message, would record one side of a generic conversation with an incoming caller, saying “Hello” when the phone was being answered by the machine, and continuing with “How are you?” and so forth before eventually revealing that this was, in fact, an answer machine message. Many incoming callers would speak for quite a while, unaware that they weren’t talking to a person, but rather a simple loop of magnetic tape. Yet few of us would then argue that for those callers, the trick message constituted the true thoughts and feelings of the answering machine. Consider also that today we can program a computing device such as Siri, Cortana, or Alexa to respond seemingly intelligently to queries like “How are you?” and to recognize simple requests and so forth. We even make them sound like a person talking.
But none of this – no matter how sophisticated – means that we are actually having a conversation with an intelligent other person.

Earlier, I stated that what was asked was really two questions. Now, we must entertain the second question, that is, who owns the copyright when a piece of artificial intelligence is pressed into service by an author or artist in order to aid or even originate a composition? This for me is a much more difficult question. An argument could be made that it is a case of a joint authorship between the artist who employs the piece of A.I. and the original programmer of the A.I., but this is an argument that I reject, for the reasons below:

The idea of a programmer for a piece of software sharing copyright with a user has actually come up before. When the copyright status of software was first contemplated in the 1970s and early 1980s, judges mused over whether, when one used a piece of software and created something with it (even something as mundane as words in a word processor) the programmer had an authorship claim to the resultant work. As time progressed, however, and more and more work of different kinds came to take place with the help of computers and software, this notion was abandoned. The final outputs were too different in nature from the programming that was used to help create them. Resulting work was also very different from other original work created with it. We therefore accept the argument today that a book written on a word processor only implicates the word processor possibly as the necessary, but not sufficient cause of the book.

However, things are slightly different in the case of A.I. engines, in that the work produced by them may require little or no input from an author. The device creates something unique, whether a text, a picture or something else that did not exist before without requiring instructions from a human author. I would argue, though, that uniqueness is not the sole characteristic of original expression. Many previously existing mundane devices “create” output that is both unique and require little guidance from a human author. Even a coffee grinder creates coffee grounds that differ in notable respects from every instance of coffee grounds that have preceded them. Snow machines create snowflakes that are, in some senses, utterly unique each time. Yet we do not ascribe creativity to such emanations of machines. These emanations from the machines are just random events. Just because the programmers of A.I. have created machines that take the rules of graphics, text or music to create recognizable material does mean that intentionality (i.e. thoughts, feelings or opinions) in the machine produced such material. Such output therefore cannot be eligible for copyright.

Therefore, because such work is not eligible for copyright, an artist could make use of such material, just as if it were in the public domain. Nevertheless – and we are in speculative territory here – we might eventually discover that certain kinds of A.I. used by multiple human artists tend to produce work that with a substantial similarity between works “authored” by different human artists, assuming they were not altering what emerged from the A.I. engines they were utilizing. Courts might then have to weigh in on the proportion of individual choices actually made by the human creator who was using an A.I. engine to settle future copyright claims. This is already done in the case of multiple people creating what is sometimes called a “thin copyright” over work that differs only marginally from that which is in the public domain.

Therefore, I hold the position that if a legitimate human creator solely used an A.I. engine to create a work, the human should not have the ability to copyright the work unless they substantially contributed to it, because it is a kind of “counterfeit” to actual work. That
being said, I acknowledge that it would be difficult indeed to prove this, and if a case were raised at law, in many cases, the artist might win, particularly if he/she suggested that he or she used the output of the A.I. machine and built upon it. Since the copyright could not adhere to the A.I. original, that artist would be free to create derivative works based on it, much as if the A.I. work were in the public domain.

In the event copyright can be attributed to A.I.-generated works, in whom should the copyright vest? Should consideration be given to according a legal personality to an AI application where it creates original works autonomously, so that the copyright would vest in the personality and the personality could be governed and sold in a manner similar to a corporation?

As I have mentioned elsewhere in my comments on these WIPO AI questions, I seriously doubt that AI can be construed as anything like a person (even in the corporate sense) such that it can be considered to be the author of anything for copyright purposes. That said, extending the idea of personhood (or “legal personality”) to an itself-copyrightable device will create a Pandora’s Box of unintended consequences in the legal and practical realms. But even assuming I am wrong about A.I.’s possible cognition, if A.I. were self-aware, it would not then be acceptable to buy and sell a self-aware entity as though it were a product. One cannot have it both ways: if AI is self-aware, then it is a person in the legal sense. If it is a person in the legal sense, it cannot be bought and sold, according to the laws of most nations and the Charter of the United Nations, as well as the Geneva Convention.

Issue 8: Deep Fakes

2. The technology for deep fakes, or the generation of simulated likenesses of persons and their attributes, such as voice and appearance, exists and is being deployed. Considerable controversy surrounds deep fakes, especially when they have been created without the authorization of a person depicted in the deep fake and when the representation creates actions or attributes views that are not authentic. Some call for the use of deep fake technology to be specifically banned or limited. Others point to the possibility of creating audiovisual works that might allow the deployment of popular or famous performers after their demise in a continuing manner; indeed, it might be possible for a person to authorize such use.

3. Should the copyright system take cognizance of deep fakes and, specifically,

   (i) Since deep fakes are created on the basis of data that may be the subject of copyright, to whom should the copyright in a deep fake belong? Should there be a system of equitable remuneration for persons whose likenesses and “performances” are used in a deep fake?

   Personally, I believe that the copyright of deep fakes is a side issue. Of primary importance is the fact that when people of social or political consequence are seen doing or saying things they did not in fact say or do, serious socio-political repercussions will inevitably occur. Not only might people believe a plausible but utterly false video confection, they might also come to disbelieve a person of notoriety saying things they in fact said.

   But as to the copyright issue of deep fakes, this must first be disambiguated from the legal ability of people to control their own image and likeness, which is handled very differently in each of the United States, and more variably still around the globe. For example, in the
United States, Indiana has very strict likeness laws, permitting people to sue those who use their image and likeness without their permission. This has been construed by the courts to also include the sound of a person’s voice, and the visual use of that person’s mannerisms. Other states with stringent requirements are, logically, California and New York, where it is many peoples’ livelihood to profit from their image and likeness. Therefore, in a sense, the deep fakes require very little new law; one is still illicitly profiting from (or gaining notoriety from) the use of the image or likeness of another person. And, unlike certain other areas of free speech, there is no absolute right to do this. Even famous people are able to control the dissemination of their images without having to worry about other parties profiting from them.

With respect to deep fakes and copyright itself, the issue shifts somewhat. That is because many of the images and recordings we have of famous people were captured by someone other than that person. So in many cases, another possibly unknown person holds the copyright to a famous image being used as the grist for a deep fake. In a sense, creators of deep fakes would probably argue a transformative nature for their output, arguing that there was great novelty in what they produced. Transformative uses however, are notoriously volatile as far as court decisions go. Artist Jeff Koons won one important case that turned on transformation and lost another important case. In the Shepard Fairey case, Fairey settled out of court rather than argue that he was entitled transformatively to use the original photograph of Obama without attribution (which had been taken by Mannie Garcia of the Associated Press).

With deep fakes, it could be argued that the purpose and use are transformative, but the substance of the deep fake is so like the original that we may need a new meaning for transformative. It might instead be considered a derivative work, which is a never-acceptable infringement of the base copyright.

Deep fakes are, to continue the analogy with counterfeit currency, a kind of counterfeit of reality. Therefore, the issue is related to whether counterfeit currency can be copyrighted. To my knowledge, the registration for such a copyright has never been sought. Thus, the question is whether a deep fake retains its copyright. It may turn on the purpose of the deep fake, whether it was done with parodic intent, auguring for fair use, or whether it was done with “malice aforethought,” which might augur against it. At this writing, pornography retains copyright, but obscene material does not. Will deep fakes be considered in the same genre as obscene material? We do not yet know how the courts will rule on this.