From:	Ian Ravenshaw Bland <ian@soreal.ch>
Sent:	Thursday, December 5, 2019 4:03 AM
To:	aipartnership
Subject:	Comments on Intellectual Property Protection for Artificial Intelligence Innovation

Dear Ms. Stewart

Greetings from Langenthal, Switzerland.

This is a hot topic for us at SO REAL. Here is why.

The creation of "the mirror world" is under way. Many companies are active in the creation of the digital twins of cities, environments, buildings, etc. Our role is the creation of the digital twins of 3D objects. By digital twin, we mean a file that will run on a game engine. The file includes: the precise geometry, colors & textures, material parameters, and physics parameters. To do this, we will be using machine learning algorithms to speed up the conversion. We have already seen how ML can reduce the processing time of certain steps of the workflow by >3000x. This is absolutely necessary as there are billions of objects left to "twin".

In many cases, there is a designer of the original 3D object. There is a creative step involved, so that object can be protected under copyright law. Sometimes the design is registered. The work of the original creator should be protected.
On the other hand, the development of the process to create the digital versions of these works involves an enormous amount of creativity as well. 24 months from now, we will have invested ~$2.5M on it. ~$1.5M on machine learning alone. And we are just one tiny company in a pool of 1000's working on this.
These processes and algorithms must be protected. Otherwise, it will stifle innovation

What about the objects themselves?
We think both the creator of the physical object and the creator of its digital version should benefit. The creator of the physical object is already covered. The creator of the digital version... that's the grey zone.
Again, if there is no protection available, it will stifle innovation. If there is no clarity in copyright law, endless fights will ensue.
In every single investor pitch, the investors ask, "Can you protect the objects you create?" We have to tell them the current situation. 90% of them shy away. No money. No innovation.

The model we are currently working with is as follows and we offer it as a suggestion.
If the creation of the AI is based on interpreting a copyrighted work, the resulting work is also protected under copyright law as long as the original creator also benefits. In our case, the creator of the physical object did no work in the creation of its digital version, so we propose 80/20.
So, the answer to question #1 is YES, but with some conditions.
And, the answer to question #5 is YES.

Here is something else to consider in the AI copyright debate.
Machine learning development often goes like this. One presents the ML algorithm with various training sets. Months and months go by and it gets it all wrong. There are tweaks to the algorithm. There are other training sets. Then one day, it gets it right, but nobody can explain why. The black box between input and output is too complex and sifting through a training set of one million data points (or even 1000) would be a

monumental task. So, you just shout, "Eureka!" and run with it. Then you tweak things here and there to improve the accuracy hoping that you don't mess up the recipe.

This sounds all too familiar. Ask a songwriter how she/he came up with a given song. Often, the answer is, "Uhhh. I don't know. It just came to me."

On the trademark side, we have run into something that can use some improvement. This one has to do with classifications. We've learned that our product, the digital twin of a 3D object, is classified as SOFTWARE. There must be a different category for digital 3D assets.

These "things" are just files. They are not executable like PowerPoint, PhotoShop, AutoCAD, or Unreal. They don't run anything. They are not even apps.

There should be a difference between things that run and things that don't. An analogy: one would not think of classifying a tire as a car.

I hope that helps.

with kind regards,

Ian

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