

IP IMPLICATIONS OF THE DATA ECONOMY

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OBJECTIVES

The IP Implications of Data Economy are multiple and evolving fast. How is the current IP system able, or flexible enough, to face evolutions required for the Data Economy, and for related new forms of trade and exchange between countries? Can evolutions of the current IP system be fast enough to meet these challenges? How can policymakers and lawmakers in different countries work at the same pace and better harmonize their work? What kind of consensus may exist in various parts of the world and in international fora for such changes? For this Session of our Global Digital Encounters, Speakers from Europe, Asia and North America with a variety of opinions will provide a worldwide picture of the future of IP Implications of Data Economy, and for re-imagining IP in this area in favor of both business and consumers/society.

REPORT

INTRODUCTION

Prof. Laurent MANDERIEUX: The data economy is considerably changing the way intellectual property (IP) system can and must function. This is something that has become quite evident. But how will we change in the future, what elasticity the IP system may have, and what consequences may happen from trade between countries and between companies? This is what we want to explore today. He then welcomed the participants and presented the speakers and the moderator.

Prof. Javier FERNÁNDEZ-LASQUETTY: This topic is incredibly relevant because the data economy is not about the future, it is about the present. Everything is currently about data. In 2015 the European Union fostered the creation of a data economy before the whole world did. In the future, we will see many improvements and evolutions in this data economy, and of course, IP is at the core of it in many aspects and facets.

Caroline BERUBE: The data and digital economy falls within the parameter of law, previously for some time it was a part of telecommunications media and technology (TMT sector), particularly in Korea. There has been a growing recognition that the field of data and the digital economy now requires its own complex set of skills and professionals to deal with it. As it is no longer involving only lawyers, but a whole range of people of various competencies. In terms of why it is such an important topic: companies that are on the S&P 500 list have intangible assets that have reached a value of approximately USD 21 trillion. This is a huge part of the economy that we cannot avoid or ignore and must discuss. In terms of cross-border transactions, we are all in different countries and look from different perspectives.

1. HOW CAN IP ENHANCE INNOVATION IN THE DIGITAL ECONOMY?

Samuel LEE: From a patent attorney's point of view IP is important for the digital economy. It helps make clients much more attractive for investments and prepares them to go public. If someone has a wonderful idea (in the data economy or otherwise) the most important aspect they need to prepare for when they go in for a series A or B funding is to have some answer to a question - "How do you protect against another company from copying your idea (product), and how do you keep your information?". You need to answer this question in a way so that investors remain comfortable with that answer. Further, without proper IP protection, it isn't easy to obtain that investment and be successful when you go public.

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The laws in this area within the US, Korea and elsewhere are still behind the times. There are certain litigations right now where individuals are trying to get patents for AI-generated inventions. These litigations are working through the legal system and in the US and Korea some decisions have said "no". This is based on the current framework of laws, which in the IP realm includes patents, trademarks, designs, copyrights, unfair competition, and trade secrets. Many companies in the digital space are choosing to keep things as a trade secret ("black box"), as a result, you do not have other competitors building on top of what you did (other than based on certain performance criteria, like in the generative AI models in the US). That said, IP is important as it helps with funding, investments, and competition.

Caroline BERUBE: IP is always crucial to increasing the value of a company and its assets. Companies realize not only the value of data but also what are the risks. Especially with cross-border transactions data can flow from one country to another. China has a new data protection law, that is very protective in terms of data collected in China. Let's say you have a Swiss company with an entity in China and they must collect data from their clients and suppliers in China. If someone decides to buy these companies, if there is a breach of data protection laws in China, it can become liable for a lot of money. Buyers now must be compliant not only with IP laws but also with data protection laws. These two aspects are in the same basket and should be very well-covered by companies.

Dr. Nicola SEARLE: Coming from a macroeconomic perspective, and in terms of why we need IP and innovation, classical economics says that we need incentives for companies to innovate. This is what other speakers talked about in terms of firms' strategies (liability, raising funds etc.). The other side of this is that we also need those innovations and knowledge to become public again and this about data is a trickier subject. The data and the digital economy have existed for a while, but there are still many areas of growth. IP is great for incentivizing innovation, but we also do not want to be completely "colonized" as we need a balance. Firms need to innovate, but there needs to be room for future innovation. That is why we are talking about IP from an economic perspective, as it is meant to eventually expire (this can be trickier with trade secrets). Of course, the patents, the investments that need to happen, and the ability for companies to know what they are buying. All these things are important, and IP is fundamental to all of those. But we shall add the fact that we need to think about how this knowledge will be used 10-20 years from now and it needs to be more open at the same time.

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Samuel LEE: A lot of this important data is held by large companies, and it is not public. Authorities in many countries have started looking into this area. Google, Amazon, and Apple keep a lot of data and they use that data for their own purposes. Then the question needs to be asked: should that data be accessible to the public? And if so in which form? Taking into account that there are also data privacy issues and certain countries require their citizens' data to stay within their national boundaries (e.g., India, China), how much anonymization of that data needs to be done to be able to freely allow sharing of that data? That's a question that governments and major companies need to answer at some point in time.

Caroline BERUBE: I was looking at a few definitions of the digital economy before the session and I was just trying to look from different perspectives (legal, economy, finance). One was from the founder of digital economy Dan Tapscott: 'It is a new economy, almost the 4th industrial revolution and it is information in all its forms that becomes digital, reduced to bits stored on a computer and racing at the speed of light across network'.

This brings the question of how companies can protect data, as it is an intangible and so easy to transport from one country to another. Therefore, we should have governments working together and collaborating. There is the ASEAN Digital Integration framework, which includes 11 countries working with a joint consistent approach. But what about the rest of the world? The data will not stay only in 11 countries, as it is "racing at the speed of light across the network". It could not be defined in a better way.

Samuel LEE: This is the base form, but does the digital economy also include the Metaverse? As well as new digital things such as NFTs that people are putting value on. As a result, companies must prepare to protect their IP, e.g., their trademarks in this digital economy. Certain trademarks are now being registered in different classes. The digital economy now is sort of expanding into realms that are user-friendly versus B2B. Many businesses now are trading some of this data, assuming that data was recorded and stored in an easily transferable way, but this is not always the case. In Korea, healthcare information (one of the major resources in Korea is data that each hospital keeps) is not easily transportable and exchangeable because it is stored in different formats and order of information, which is also something we should worry about in these databases.

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Caroline BERUBE: It can also be difficult to transfer files from one country to another. Around 6-7 years ago to transfer healthcare data you were required to get it in hard copy and bring it to a hospital, which did not always want to see this hard copy (because of data privacy issues). There are many rules which do not allow us to receive data.

Dr. Nicola SEARLE: Reverting to the question about IP enhancing innovation, one of the aspects here is the idea of open innovation and its subset - open data. Many clients are practising open innovation using licensing and collaboration with joint ventures in various forms. Open data is a slightly different challenge because it is tracking who owns what. As of now, a lot of value is left on the table because we cannot figure out who owns what and who gets to own what comes out of this open data.

Samuel LEE: When you want to create something that is open data, it should come in the right format. You need some standards as you do not know how biased is that data. There is no entity to test that data for whether it is unbiased or accurate. Right now, data is being generated and there is no standard for that data.

2. HOW SHOULD IP RIGHTS BE PROTECTED AND ENHANCE ENFORCEMENT IN THE DIGITAL ECONOMY?

Caroline BERUBE: It is not one entity or one part of the government that must deal with it, this should be done cohesively. In Singapore, there are ACRA (The Accounting and Corporate Regulatory Authority) and IPOS (The Intellectual Property Office of Singapore), one for the companies, and the other for IP and they are working together to create a joint framework. But, again, this is about Singapore, however, if we talk about data across the world, it is interesting how to deal with it.

Samuel LEE: In terms of the law, it is behind the times. As a US-licensed attorney, I can say that US law is behind the times in terms of data protection and privacy. Certain states within the US have separate privacy laws which are stronger than the national standard, but generally, the US is behind. The GDPR is better in terms of data privacy. Korea has stronger data privacy protection with the Korean Personal Information Protection Act on the level of GDPR. Finally, in Korea, the Copyright Act has a database protection portion in it where it is protected for 5 years, and you need significant effort to renew (update) the database to extend it for another 5 years. In essence, other countries (including the EU) are re-evaluating their laws to come up to speed. Because of the speed with which the digital economy is changing, especially after generative AI has made such a huge hit, the governments are being reactive with the laws right now, they are playing catch up.

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Caroline BERUBE: This is what we encounter in China. The data protection laws are new, 18 months old, now the question is how it is going to be enforced. There are very few court cases on this in China right now. Even if lawyers decide how it is going to work and advise clients, courts and governments can have a different opinion. Thus, although the law is there, enforcement is very new, and we do not know in which direction the government and court will go. Once they do it, the law will probably need to be amended again, because the digital economy is moving fast, especially post-COVID. During COVID so many things were disrupted, and such industries as e-commerce, subscriptions, and electronic signature have been changing at a rapid pace because of COVID, and it may not have been so fast without COVID. Companies were forced to be innovative to carry on business.

Samuel LEE: One thing that everyone might be interested in - in the trademark space there have been certain classes modified and upgraded to include virtual goods and cover virtual transactions. You file the trademark application, and then you have to identify the goods classes. There has been a recent litigation filed by Hermes as there was an NFT of one of their famous bags that was sold. Thankfully, they have updated their trademark registration to include virtual goods, and it included these necessary classes (such as class nos. 9, 35, 36, 38, and 42 and including blockchain).

Dr. Nicola SEARLE: Quick comment on NFTs, it caused a bit of a problem for trademark owners and brands. It will be interesting to see what happens next as the market has self-corrected in some ways. If we have other areas as the digital economy and data develop, will we have new bubbles such as AI-generated content and IP-related issues? With NFTs it was such an interesting combination of IP and creativity, and where consumers did not understand at all what they were buying. A lot of opportunities have died with the market.

Samuel LEE: Unfortunately, there was a combination of buyers not understanding what they were getting and sellers who were not completely honest about what they were selling. These rights were written in the attached contracts for these NFTs, and these contracts were using language that was not exact. I must say that bubble has burst because the metaverse has not taken off as fast and greatly as everyone was thinking it would. It was expected that with COVID everyone would go online and live in the virtual worlds instead of experiencing life. When the metaverse becomes as developed as the internet is right now, where what you do right now on the internet you are going to do things in the metaverse - designing, meeting people, even financial transactions.

3. WHAT ARE THE ISSUES AND OPPORTUNITIES OF ARTIFICIAL INTELLIGENCE (AI) IN RELATION TO THE EXISTING IP FRAMEWORK AND THE DIGITAL ECONOMY? FOR EXAMPLE, SOURCE AND OBJECT CODES CAN BE PROTECTED BY COPYRIGHT, BUT HOW DO YOU SEE IT IN YOUR FIELD?

Prof. Nicola SEARLE: When we talk about the creative industries because a lot of AI is text-based at the moment, this is about creations and creative content. If we look back to 20-25 years ago to the advent of the digital economy, how it evolved specifically looking at the music industry, we had Napster where you had no idea who was consuming what, and there was a lot of infringement. Then we moved to iTunes, then later to Spotify, and now TikTok, which is doing well in terms of music, and now we are not quite sure what happens next because there are still tensions. It has been an evolution and I think that we are in the same spot now with AI as we were in the Napster phase. We have a lot of free content, which we are consuming and not paying for these services. We are going to see more advanced tools and the equivalent of iTunes is going to be around the corner, provided that there will be financially viable services for consumers and B2B.

So, we are at this point where we don't know what we are dealing with yet, but a lot of copyright questions come up - who owns it, who should be paying for it, who knows what goes in and out, who is liable. These are the big questions that the lawyers must grapple with. This should also be analyzed in terms of economic impact. What we see right now is everyone struggling in all these jurisdictions trying to figure out what to do and several lawsuits are going on. It will be interesting to see how this develops and compared to Napster which had no money, now AI is owned by companies with a lot of money, could this be a Google Books situation? I do not think that at this point we can take sides, it is so unclear what needs to happen or what should happen, and what is fair. A lot of things are happening with copyright and the trade secrets side of it is also very interesting.

Samuel LEE: In terms of some background about copyright, the AI engines with slight modifications are pretty much public and certain companies like Open AI or Google their AI engines are slightly different, but in essence, these engines are modelled after language models. As a result, they are trying to predict the next word or the proper sequence of sentences. What you do is you create this model, and you teach it, feed it, using the computer power that you have with information from tons of books and images, etc. which are copyrighted material. The first question becomes: when you train an AI model, does using this info itself infringe the copyright law or the legal rights that you have? That's a question, because is it reading it?

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In copyright, one of the rights you have is the right to reproduce, along with other certain rights. If we look at this in terms of a book or music in Napster, if you have a music mp3 file and you download it, get a copy of it, and enjoy that music. In this case, when you use it in the AI model to teach it there is still a question. I think there is an infringement, but not a traditional infringement. These litigations are currently happening with copyright owners of books, images and music against Open AI and other companies such as Google. These questions have not been answered right now and are currently being considered in the legal system. If you are going to use data without any ramifications, this should not be fair.

Looking at how Google News service operates, before they would reproduce entire articles, they now put a link to the original news service, and this only occurred because of litigation. I agree with Nicola that issues should be worked on through the courts based on current and future laws depending on which country we are talking about.

4. IMAGINE A COPYRIGHT OWNER IS IN THE US, AND THERE IS AN INFRINGEMENT HAPPENING IN THE DIGITAL AREA FOR EXAMPLE, IN INDONESIA OR AUSTRALIA. WHAT IS THE PROCEDURE FOR BRINGING A CLAIM AND THE JURISDICTION? IS IT WHERE THE INFRINGER IS BASED OR WHERE THE OWNER IS BASED? AND HOW TO CALCULATE DAMAGE? THE PRACTICAL QUESTION OF DOING THIS IS SUCH A FLUID SITUATION.

Samuel LEE: This is going to be a big problem, and I assume the analysis will follow how infringement on the internet was dealt with. The question is where that data came from and who packaged that data and made it accessible.

Prof. Nicola SEARLE: Noted she likes this idea of offshoring and outsourcing copyright infringement. It is also interesting if this dynamic ends with content creation being put in different countries for strategic reasons.

Samuel LEE: Yes, looking at the case of derivative works. It is a secondary work based on a primary work. An example would be Andy Warhol's painting based on someone's photograph as it will be a derivative work of the original photograph.

Caroline BERUBE: It is challenging. Even what we are discussing now, what if we discuss it in 12 months or 3 years, our conclusions will probably be different.

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Samuel LEE: Open AI trained their 3rd generation in less than 6 months with the previous generation taking around 1.5-2 years. The computing power and the algorithms that they use, and other things are changing so quickly. The reason Microsoft invested so much money in Open AI is that they wanted to use the algorithm in Microsoft products, even now the emails are automatically being written for you.

Caroline BERUBE: Like some people use ChatGPT to write an essay. You type 5 words and get a decent text.

Samuel LEE: Even Amazon when you go on a website already knows what you want.

Caroline BERUBE: However, I believe now there is a tool, which allows teachers to check whether your essay is an original text. Is this true?

Prof. Nicola SEARLE: We should all believe there is such a tool even if it does not exist. Previously there was a predecessor tool which did a literal check on students' work and with this copyright issues arose as it was built on existing work.

Samuel LEE: There is a tool that checks, but it is not 100%. You can ask students to write in class and compare it with the homework.

Prof. Nicola SEARLE: This is now being discussed across universities right now, as it goes to the issue of plagiarism: what does it mean to copy someone else's work? We are trying to figure out how we are dealing with AI-generated content, and where is the line between copying and creating. Indeed, new responses and guidelines should be issued for universities.

5. MANY COUNTRIES WANT TO OWN THE CONCEPT OF A DIGITAL ECONOMY. WHAT IS THE CHALLENGE OF THE DIGITAL ECONOMY FOR THE COUNTRIES? DO YOU THINK THAT COUNTRIES SHOULD WORK TOGETHER THROUGH GOVERNMENTS, CENTRAL BANKS, AND THE PRIVATE SECTOR? SHOULD WE HAVE REGULATORS ACROSS THE WORLD WORKING ON THIS?

Prof. Nicola SEARLE: Looking at it from a negative angle, there is a lot of competition in this area, which raises the issue of what future we want for the digital and data economy. I do not think there is any agreement on what this future should look like. Therefore, I will be curious to see if governments can get together and come up with something that enough people would agree on. There are potential areas for discussion on privacy, compatibility standards, standard essential patents (SEPs) etc.

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There is also an increasing discussion on the geopolitical tension on IP and innovation, so there is a lot of contested space in this area. There are some areas from a government level where there can be more cooperation, but there are areas where we are going to struggle to get cooperation.

Caroline BERUBE: Looking at when there is a breach of IP, the damages that can be obtained differ from country to country. So, this small aspect of IP differs from country to country. As I mentioned, 11 ASEAN countries are working together, do we have something similar?

Samuel LEE: Unfortunately, at the government level there is too much politics and history which would get in the way of this solution. But I do think that this is the best solution. When it comes to the data economy, I believe it is going to follow the 'standards bodies' in different industries. In the wireless industry, there is a standard body composed of different industry players as they know the technology and set the standards for 4G, 5G etc. For healthcare data or consumer purchasing data, these industries must work together to create the standards, and this will be much more efficient. Ideally, there should be a UN body which regulates the data in an unbiased and neutral way, but there is too much politics and history for this solution. The EU as a block can implement this solution as they did for GDPR, which other countries such as Korea followed. I am hoping that the companies understand the commercial benefits of coming up with a certain data structure or sets of data that can be used in that industry such as healthcare, consumer, and electronics. I can point to the SEP bodies IEEE, or Wireless Association, where all the SEP issues are being resolved.

Prof. Nicola SEARLE: Open data institutes and other civil bodies might be able to work on this and create cohesion where it is not possible to do so on a government level.

Samuel LEE: Looking at China, which has an extensive DNA database of their population which they created because of COVID. There is no way they are going to share that data with other countries.

Caroline BERUBE: However, such sharing may be beneficial for the global population. As it represents such a large dataset that can yield interesting conclusions.

Samuel LEE: One of the important areas of data economy is data mining. It means you get a large dataset to understand what certain trends are within certain people, economic levels, or other ranges. This data mining technique can be used for healthcare benefits, e.g., to identify trends in certain diseases, reactions to drugs etc. Alternatively, this information can also be used in many negative ways.

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Caroline BERUBE: This brings up the point that different expertise should be combined if we are going to have consistent rules across the world or per region. It should include not only lawyers, but also economists, engineers, and specialists across competency. The digital economy needs to involve different expertise.

Prof. Nicola SEARLE: This is an interdisciplinary space and needs different expertise for it to work.

6. IF WE WERE GOING TO CREATE A NEW IP RIGHT - WHAT SHOULD BE THE NEW ONE TO ENSURE?

Prof. Nicola SEARLE: I believe we should wait and see. The EU created the database right, and it has not been that useful. I would like to think that the existing system has enough thought behind it so that all these new things can be adapted.

Samuel LEE: I agree, the only other right is an 'algorithmic right'. Personally, an algorithm is functional and therefore should only be protected by a patent right. There is some discussion about algorithmic rights, which is really about software rights, which are typically covered by copyright and need to be of the entire software. An algorithmic right is one functional part of that software and, therefore, should not be protected separately. We have sufficient protections under copyright and patents. Concerning database rights, it is difficult to understand and define a database unless it has a particular functional value to it, e.g., healthcare data related to a certain cancer. This is a very strong database, so unless it is a specialized database where you can define and identify it properly, it is not easy to enforce, if someone breaches this right.

7. DO DATA MINING ACTIVITIES INFRINGE COPYRIGHT?

Samuel LEE: Possibly, but it depends on the underlying facts. Data mining is identifying trends within a ton of data. To understand the trends, you have to read and evaluate that data and compare it with other data. Depending on how the original data is there might be a copyright infringement.

CONCLUSION

Caroline BERUBE and Prof. Laurent MANDERIEUX expressed gratitude to the speakers.

Prof. Manuel DESANTES: Thanked Caroline Berube for acting as moderator, the speakers, attendees, and reporters. Noted that the panel has dealt with dozens of issues. Starting with the question on IP enhancing innovation, and then bringing into discussion the Asia perspective and considering from an economic perspective. As well as delving into relevant issues and specific fields such as healthcare data, data privacy and protection legislation, copyright, trademarks and virtual marks, trade secrets in the new economy, open innovation, and the challenge of open data, etc. By bringing new questions to the encounters, we enlarge the potential of future encounters and enlarge the potential of our attendance. What is evident is that things are changing very rapidly, and the IP system has to respond with the same speed.

Report written by GDE Support Team members Arielle ABERDEEN and Yulia BORISOVA