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**BUILDING RESPECT FOR
COPYRIGHT: FIGHT
AGAINST COUNTERFEITING
AND PIRACY IN THE
DIGITAL ENVIRONMENT
(EXPERIENCE OF
AZERBAIJAN)**

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Welcome speech

Dear friends, ladies and gentlemen, distinguished guests!

Today's regional international conference jointly organised by the Copyright Agency and the World Intellectual Property Organization (WIPO) focuses on the promotion of copyright and the steps taken against piracy and counterfeiting in the digital environment. In this regard, I would like to express my gratitude to Mr. Ilya Gribkov, Head of Section, WIPO, and to convey gratitude to Dr. F. Gurry, Director General of the WIPO, for his friendly relations and kind attention to Azerbaijan.

I'd like to express my special gratitude to Mr Thomas Dillon, WIPO Legal Counselor and Mr. Gwilym Harbottle, UK Barrister for the presentations to be heard.

At the same time, I want to welcome our foreign expert guests from Kazakhstan, Kyrgyzstan and Uzbekistan and express our gratitude for their participation.

I express my sympathy for respected Azerbaijani friends for accepting our invitation.

Dear Conference participants!

As a result of the efforts of the Head of State, Azerbaijan is increasingly becoming a state that realizes economic reforms, diversifies its economy and leads to innovative development. Since 2009, Azerbaijan is among the top-middle-income countries. Today, Azerbaijan is a country that respects itself and is characterized by its tolerant and multicultural traditions among its partner countries and is a platform for influential international events.

Realities of Azerbaijan are accompanied by the rise of the country's global rating indicators. According to the

World Economic Forum's Global Competitiveness Index 2017-2018, Azerbaijan has strengthened its position and risen from 37th to 35th. Bypassing a number of developed countries, Azerbaijan is an indestructible leader in the CIS region.

Countrywide reforms have a positive impact on intellectual property. Azerbaijan ranks 37th with 4,8 value on "Intellectual Property Protection" sub-index of the Global Competitiveness Index.

Thus, Azerbaijan increased its leadership position among the CIS countries by 34 points from the 71st place in the last 2016-2017 year on "Intellectual Property Protection" indicator.

Azerbaijan ranks 33rd in "Innovations" position with respect to "Intellectual Property Protection", yet it is a leader in the CIS region. As a result of the institutional reforms carried out by efforts of Mr. President Ilham Aliyev, the Copyright Agency is participating in today's conference with a new status.

Thus, the Agency is a legal entity of public law founded by the Head of State, having state and public importance, of which employees are considered to be equal to civil servants, providing development of IP rights area of copyright, related rights, Azerbaijani folklore expressions (traditional cultural expressions) and other intangible cultural heritage samples, topographies of integrated circuits and data compilations, implementing single regulation and control and coordinating activity in this field.

We are grateful to the fact that this event is being held in Baku as a result of the efforts of President Ilham Aliyev, as well as the manifestation and confession of the development of the Azerbaijani copyright system by

international structures and supporting the future achievements.

Currently, 5 laws (including the Law on Enforcement of IP Rights and Fight against Piracy) and up to 100 legal documents form the basis of copyright of modern Azerbaijan. The share of our country's creative economy (our copyright and related rights industry) exceeds 5%, is in average on the world, leaving behind some developed countries. As a result of anti-piracy measures, the level of piracy decreased from 61% to 29% in book sales, from 90% to 65% in audio and video products, from 96% to 75% in software.

As a result of appreciation of the copyright-law system of independent Azerbaijan, which has taken part in all international agreements, Azerbaijan has been represented at the Coordination, and the Program and Budget Committees of the World Intellectual Property Organization, our colleagues have acted as an international expert, and our representative has been selected Vice-Chair of the WIPO Copyright Treaty Assembly.

At the moment, the Copyright Agency is a fully computerized structure. It includes SMART-distant learning system with modern technology and equipment, the Center for enforcement of intellectual property rights and Digital Rights Management Service, a modern typography. The Agency is connected to the "Electronic government" portal and provides 5 state services.

The future of this system has a special place in the "Azerbaijan 2020: Look into the Future" Concept, signed by President Ilham Aliyev. In this Concept, intellectual property is regarded as a priority, and in paragraph 6 of this unique document, important tasks regarding the

intellectual property system, in particular anti-piracy steps have been reflected.

Dear colleagues!

The period we live in is a period of leap in technology, a time of significant technological change in the life of society and in the development of the economy. The results of the digital revolution have created a new reality in all areas, and digital innovations put forward new conditions by creation norms of behaviour called "digital imperative", which derived from the characteristics of digital technologies.

Moreover, in digital media, the flow of information increases with geometric progression speeds, so in volume of 2.5 quintals bytes data per day are increasing. This means that 90% of world-wide data has been created only in the last two years. The new reality has led to massive infringement of rights. With careful consideration of figures on piracy and counterfeiting figures of international organizations, however, they are disturbing by their scale indicators. According to the research of INTA (International Trademark Association) and BASCAP (Business Action to Stop Counterfeiting and Piracy), created by the ICC (International Chamber of Commerce), made in 2017, the volume of pirated and counterfeit goods was reaching US \$ 650 billion in 2011; it has increased up to US \$ 1.8 trillion in 2015.

According to the Organization for Economic Cooperation and Development, in 2013 the trade volume with counterfeit and pirated goods was 2.5% of international trade (US \$ 461 billion), with an increase of 80% compared to 2008. This figure will reach US \$ 991 billion in 2022, based on the Frontier forecast for BASCAP. According to this organization, the volume of digital piracy in music and software was US \$ 213 billion

in the same period and will reach US \$ 856 billion by 2022. The most common method of digital piracy is P2P networks and in 2015, 47,8 billion illegal movies were downloaded. 27.4 billion illegal music tracks loaded via Bit Torrent network in 2015. They should be taken into account in the field of copyright protection, intellectual property.

Please note, the anti-piracy at the international level has been going on for years, but world-wide measures, including legal steps, do not give any results yet: rights continue to be infringed. We need to consider the requirements of the "digital imperative" to obtain more favorable outcomes of the struggle, and investigate its impact on the legal regulatory mechanism. As for the field of intellectual property, we must admit that the techniques and algorithms related to the circulation of the IP, traditional measures to protect rights cannot be mechanically applied in the digital environment. Moreover there is a difference between protected traditional work and protected content i.e. digitalized content. On the one hand, content is organized by the nature of the content and lives on the rules, while the form of copyrighted work is weakened and the role of content of the work is increasing in accordance with the essence of the content.

Regardless of our endeavors, copyright-protected content is individually maintained and, on the one hand it is positive: the use of artifacts globally increases the demand for IP rights. On the other hand, illegal use increases, and the violation of rights goes beyond the control.

Dear conference participants!

As you know, law was viewed as a key tool for formulating policymaking for decades, even for centuries in the field of copyright. But in digital environments, it

becomes a tough enough, even limited tool. Because the territorial principle of copyright, in contrast to the impact of the physical world, has weakened in digital environments, due to its volume of movement and international multidisciplinary nature. Economic and technological institutions have already come out of this territorial cage. The Internet culture today is somewhat certain that its proposed platforms influence the behavior at the legal level, even more than it does.

In a word, it should lead to these platforms and the Internet culture created by them in order to protect their position as an ultimate arbitrator, a judge in the field of copyright. And this affirms the traditional position of the Copyright by the fact that the rules relying on hardening the punishment do not bring the desired results. It is no coincidence that international and national legislative initiatives on anti-piracy ACTA, PIPA and SOPA based on these principles have not yet entered into force, and the effect of the HADOPI French law has been abandoned.

I want to clarify my position. Internet-services and platforms in the framework of Web-2.0 such as, Wikipedia, MySpace, Facebook, YouTube or Flickr blogs (Twitter), peering networks P2P, file sharing networks (Bit Torrent) and so on expand and facilitate copyright infringement. Web-3.0, equipped with "cloudy" calculations, will provide more integration and trans-boundary information space and, therefore, further aggravate the situation.

In short, digital technologies have brought advantages to users, and the balance between them has been violated in favor of users.

Dear participants!

At the top of the policy pursued by the Copyright Agency in respect to right holders in the use of their works, stands the social policy formed by the Head of the State. This means that the royalties for the authors should be timely and transparent. The government's renewed decision serves to avoid paying royalties for organizations that use works and respectfully rely on copyright of authors. This decision applies to all areas of uses of the author's works. In order to clarify the issue, a number of informative articles, TV broadcasts were organized by the Agency, and special booklets for restaurants were prepared. In short, the authors should reimburse the use of their works, we once again declare that the users using the works must conclude and adhere to the license agreements with the collecting societies.

At the same time, according to experts, the existing collective management system of public organizations does not meet modern requirements. As for the use of works in digital networks, they are beyond control. For these reasons, the Agency has established a digital rights management system on the Internet and it is being put into use. At present, a special platform based on blockchain technology is being created to further improve this system. This modern technology means returning to individual management of works that are more accessible and fair than collective management on the basis of modern technology. The presentation will give you more information about what I said. Now I want to note that blockchain technology, on the one hand, provides the registry and usage conditions of all accessible products, organizes personal use of network participants, thereby optimizing, paying off the author's remuneration, and checking each payment transaction. On the other hand, it

eliminates mediators, increases credibility, and puts a large shield against piracy.

Dear friends!

Taking into account the participation of foreign guests in the conference, I should talk about a particular kind of piracy that Azerbaijan has encountered - Armenian-hay plagiarism, misappropriation and frauds. In short, we are talking about the protection of intellectual property belonging to the nation.

The issue of protecting the rich cultural heritage inherited by our ancestors from the distortions and attempted suit has become a political and legal problem, leaving the framework of the protection of material and moral values today. Therefore, the facts of misappropriation of material and moral values and ancient cultural expressions should not be regarded as "harmless plagiarism" attempts accompanying the globalization process. Armenian purposeful misappropriation attempts of ancient monuments, folklore, folk music, kitchen samples, carpets, dances, as well as musical instruments belonging to the neighboring peoples, especially Azerbaijanis, are not a sign of "intercultural integration process". It is precisely the political interests behind such efforts. The aim here is to collect fake "factual materials" about Hay's being allegedly the "aboriginal", "the oldest residents" of South Caucasus region, realization of "great Hay culture", "Great Armenia" dream by misappropriation of tangible and intangible cultural heritage, folklore expressions, traditional knowledge belonging to Azerbaijanis and to generate misleading public opinion.

In short, the roots of the Armenian plagiarism are closely related to territorial claims, while keeping the occupied Azerbaijani territories as much as possible,

looking for other lands. However, it is also true that along with the kidnapping of Azerbaijani folklore and traditional knowledge, it is highly influenced by some kind of Armenian folklore creativity - mythical creativity, a kind of "national talent". This newly-created mythology links the "great land" stereotype and the territorial claims against neighbors, and this mythology brings "naturalness" to the misappropriation of the cultural heritage of the neighbors, even bringing "legitimacy". Finally, this is what determines the morality of Armenian figures - whether politicians, scholars, or mass. The myth of the Armenians' "excellence" and the ambitions and claims arising from the thesis of "suffering" against the outside world are trying to eliminate the natural role of naturalism in the Armenianism thought, the stereotype of the "special mission" of the Armenians prevented the recognition of international law as the cornerstone of modern peace building.

Dear friends!

This tendency is very dangerous, and it is a fatal outcome for the prosperous future of the international community. Thus, the "Armenian tradition of misappropriation of the Azerbaijani cultural heritage" and their modern recidivists should be prevented and we prevent them.

The mission of unmask of Hay-Armenian frauds and fabrications and the expulsion of Armenian mythomania with ancient texts and historical evidence in the classical sources, scientific evidence and undeniable facts should be continued. The Agency has prepared tens of books and brochures, distributed among experts and community members.

However, other practical steps should also be taken. Thus, a unique law was adopted in our country in 2003

on the legal protection of our folklore expressions. Taking into account that the plagiarism of Azerbaijan folklore expressions occurred outside of Azerbaijan, it was decided that the legal and physical entities of foreign countries should obtain permission from the Copyright Agency of the Republic of Azerbaijan to use Azerbaijani folklore expressions. At the same time, the Agency has created a rich "Folklore" electronic database to be considered the treasury of our national heritage. To protect this information, we have developed guidelines on the registration of folklore expressions. Here our aim is to provide "positive" and "defensive" protection of folklore expressions.

"Enforcement of the legal protection of the objects of intellectual property rights, including folklore expressions (traditional cultural expressions), traditional knowledge and other intangible cultural heritage belonging to the Azerbaijani people, prevention of violations of their possession and use rights, and taking relevant measures" is intended as an essential direction of the new Charter of the Copyright Agency, approved by Mr. President Ilham Aliyev.

At the same time, our country was for the rapid adoption of the Convention on the Protection of Folklore expressions of the World Intellectual Property Organization and now it is important to adopt such a convention.

Dear participants of the conference!

At the end of my speech, I would like to note that the digital era has changed many things. The content created by it today is also considered as the main product and the source of the digital economy, just like a digital file - both technology and the place of production. The current context of intellectual property worldwide is principally

different from its occurrence. The new context is turning it into a dominant economy, a vital tool of digital society, and a cultural heritage security provider by changing the place of intellectual property in both the economy and the community. The changed context of intellectual property requires, in the same way, the change of our thinking in terms of intellectual property and its role.

I wish you success in discussing these and other issues. Thank you for your attention.

Building respect for copyright: fight against counterfeiting and piracy in the digital environment (Experience of Azerbaijan)

Introduction

- When you think about raising the question of forming a respectful attitude to IP rights, then naturally the tasks and methods of fight against piracy and counterfeiting come to the foreground. And this is true, but under the condition of traditional understanding of modern IP, when a disparaging attitude to the property of creators and rights holders is fraught with significant damage for the development of economy and culture, understood in a broad sense.
- It is also true that the formation of an IP culture is achievable with continued attention to public awareness about the essence of IP rights, the growth of the competence of all layers of the public, including rights holders and users, information intermediaries and representatives of law enforcement and judicial bodies that protect these rights.
- At the same time, modern understanding of IP and its functioning take place in a context that is very different from its traditional perception, and it caused by significant technological changes in the life of society. And this, in turn, requires re-thinking and understanding the reasons and factors that contribute to disrespectful attitude to intellectual rights, and most importantly, the development of approaches and measures that prevent unwanted scenarios in the development of modern IP.

It is from this key moment that I would like to begin this presentation.

“In future, it seems inevitable that technology will increasingly dictate the shape of the international architecture and its governance”

(Francis Gurry, WIPO Magazine)

I. Modern Copyright and digital imperative

1. Technologies will have an increasingly dramatic impact on the existing **IP landscape**. IP should not resist, but adapt to them. These changes are not in themselves negative, they must be accepted and understood in order to determine the future evolution of IP.

- ✓ *“The Internet changes everything, the scholars say. If copyright stands in the way, then you’ve got to change copyright.”* (E.Samuels).
- ✓ Despite the fact that the history of copyright XIX-XX centuries. - the history of adaptation of legal norms to constantly changing technologies (telegraph, camera, radio, recording devices, computer), the Internet and the information technologies generated by it have cardinal features that leave a mark on the law.
- ✓ Along with the growth in the number of legitimate use of IP objects on the Internet, the number of violations of moral and property rights is increasing, which associated with the distribution of literary and musical works without the consent of right holders, the trade of counterfeit goods, the registration of domain names that come into conflict with the rights to trademarks, etc., and such violations are transboundary in nature, therefore, the question arises about the impact of exclusive rights on the results of intellectual activity.
- ✓ Obviously, Internet users have gained technological advantages due to new platforms of interaction already within the framework of Web-2.0, and due to the very

specifics of digital content, in contrast to works in the traditional sense, for the protection of which copyright arose. Thus, the balance between the availability of works on the Internet for users and the stimulation of creators and distributors of copyright objects was broken in favor of the former.

- ✓ Indeed, Internet services and platforms in the framework of Web-2.0, such as Wikipedia, Facebook, Myspace, platforms for user-generated content, such as Youtube or Flickr, blogs (Twitter), peer-to-peer networks P2P, file-sharing networks (Bit Torrent), etc., expand the interaction in the exchange of information, thereby creating conditions for unauthorized users that contribute to infringement of copyright. Web 3.0, which came into force and focused on a specific user, will further exacerbate the situation by providing even greater integration and cross-border information space, equipped with "cloud" computing.
- ✓ Along with this, there is a legal degeneration of works turned into digital content. First, due to the information nature of content, the importance of the content of information increases, i.e. the content of the object of copyright, and, in parallel, weaken the notion of form, which protected by copyright. Secondly, new digital forms of creativity arise, such as fragmentation, mixing, mashing, sampling, etc., which blurs the form of the work in the form of content. Furthermore, the prohibitive function of the exclusive right works badly, otherwise the laws of value behave, the notion "copy" changes its meaning and the notion of "access" becomes more important.
- ✓ **For this reason, here exists an opinion that there is a fundamental contradiction between the territorial nature of IP rights and the cross-border global**

nature of the Internet and the information nature of the content. This contradiction touches on many issues of international private law, and in particular, new approaches to understanding the rights of Copyright, as well as the establishment of international jurisdiction and the law to be applied. It is the use of electronic cross-border means of communication, including the Internet, cable TV and radio, which facilitate cross-border disputes involving violations of exclusive rights, and that issue was the subject of a study conducted in 2015 under the auspices of WIPO.

2. Digital problems of Copyright unfold on the background of a common digital revolution, which is the formation of a new reality, based on the "digitalization" of production and social processes.

- The new digital era is expressed in the application of integrated industrial networks with using the artificial intelligence (AI), the widespread use of high-speed Internet and the Industrial Internet (Internet of things), the introduction of cyber physical systems and neuro-technologies with a fundamentally new mechanism of human interaction and robotic devices, the application of automatic identification services, collection and processing of global databases (big data), cloud "smart" robotic complexes and industrial objects (smart everything), in the development of social networks and a variety of platforms and services in the digital environment, IT communications, including the Internet.
- In this case, the information flow in the digital space grows exponentially. **Each day, 2.5 quintillion data bytes are created, which means that 90% of all data in the world is created only in the last 2 years.**

- Digitization, while developing, stimulates new changes and technological innovations, and they, in turn, rise difficult legal problems in the digital ecosystem, namely, the preservation of personal data in the Internet and the maintenance of cyber security, the protection of intellectual rights and other constitutional rights of citizens, maintenance of the legality of digital services, protection of the information of critical infrastructure and cloud technologies, ensuring inviolability of private life.
- **It is appropriate to make the following digression** regarding the digital paradigm and its impact on modern IP. The discussion on this issue was initiated by I.Hargreaves in connection with the adoption by the UK in 2010 the Digital Economy Act, later replaced by the new law with the same name from 2017, which expanded the rights of the supervisory authority in the field of IT communications (Ofcom) on the control over the observance of copyright and the expanded jurisdiction of courts for the protection of rights holders, the interests of Internet operators and Internet users (See: Ian Hargreaves. Digital Opportunity: A Review of Intellectual Property and Growth. London: HM Government, 2011. – C.53: <http://www.ipso.gov.uk/ipreview-finalreport.pdf>.; Digital Economy Act. 2017: http://www.legislation.gov.uk/ukpga/2017/30/pdfs/ukpga_20170030_en.pdf.)
- Digital innovations create an orientation that, following Kant, which considered by experts as a **peculiar imperative** (i.e., prescription, behavior resulting from the characteristics of digital technologies), the "**digital imperative**", as analysts from BCG (Boston Consulting Group) called [See: "Mastering the Digital

Imperative”. Digital BCG, 2017, <https://www.bcg.com/expertise/digital-bcg/default.aspx>].

- **What conclusions follow from the recognition of the digital imperative?**
- **The digital imperative, as noted above, affects the legal regulation mechanism in general and, in particular, in the field of IP, in such a way that often the methods and algorithms of IP circulation, as well as protection of IP rights cannot be mechanically applied in the digital environment. The copyrighted content, freed from the material shell, acquires additional commercial value, since it is possible to deliver it to any point of the globe with minimal costs and additional consumer properties. This property of content causes the globalization of the use of works, including unlawful, and simultaneously increases the investment value of culture, science, education, business and entertainment.**
- Law, as is known for decades, if not centuries, was considered as the main means of forming policy in the field of copyright. However, in the digital environment, as Dr. F. Gurry notes, it turned out to be quite tough, and even a limited tool, because in the digital environment with its traffic volume and international, multi-jurisdictional nature, the territorial principle of copyright was weighed in comparison with its action in the physical world. But from this territorial cell, in which it turned out, economic and technological institutions have already escaped. Even the culture of the Internet is now such that the platforms it offers affect the behavior in the same, if not to a greater extent, than the law. In short, in order for the right to retain its position as the final arbiter in politics, in copyright it

must make room for platforms and the Internet culture that they generate. And this is confirmed by the state of the crisis of traditional copyright, when reliance only on the model of tightening traditional copyright does not bring tangible results. It is not by chance that the international and national legislative initiatives to strengthen the fight against piracy such as ACTA, PIPA and SOPA based on these principles have not entered into force, the French law HADOPI, which provided three-strike procedure to violators with a final blocking their site, was revoked.

3. What kind of changes are expected in the field of IP management in connection with the digital imperative?

- New information-technological solutions will create new opportunities for managing the increasing demand for IP rights, stimulated by the growing role of IP in the knowledge-based economy. The current IP system, according to experts, is capable of solving many new tasks, but not all, because there are fields that are problematic for both IP and other policy fields. Francis Gurry in “The future of intellectual property: opportunities and challenges” (WIPO Magazine, October 2017), considered the application of IT in the field of life sciences and artificial intelligence to those tasks.

According to F.Gurry, in addition to policymaking challenges, a system challenges also arise, one of which relates to the fundamental principle of transparency upon which the existing IP system is built, since all those who seek an IP right must fulfil an important condition of publicly disclosing certain information about the new technologies, products, services or object of copyright. And thanks to this principle, others find out who owns IP

rights and the scope of them, which in turn facilitates the exchange and use of these rights and, as a result, supports of technological development, business and social progress. This function undertakes by the public sector, which held public records of property rights, usually IP offices, and the emergence of new technologies such as “**blockchain**”, which offers a secure means of record keeping, can be expected to further blur the lines between the public and private spheres. “Blockchain” technology does so by means of a private technology rather than a public register. **There are interesting experimentations with blockchain in the copyright sphere**, and it can easily foresee its application in all areas of IP licensing. Thus, with “blockchain” technology the private sector may become an ancillary record keeper. That is why, according to Francis Gurry, we need to consider what impact that will have on the transparency of the market for knowledge goods, will it improve IP rights management systems? However, certainly this technology has huge potential.

II. Intangible capital and re-thinking the role of IP

Along with the digital imperative, there are extremely important factors that shape the context of the functioning of IP.

1. As noted in the recently published WIPO study on the current state of IP, entitled "Intangible Capital in Global Value Chains" (WIPR, 2017), over the past few decades, the wealth creation center has moved away from tangible assets, i.e., physical capital to intangible assets, or intellectual capital (capital, based on knowledge). This is manifested in the sphere of investments.

- This important transition explaining the context of the functioning of IP is confirmed by the fact that in the economy of a number of industrially developed countries more investments are invested in capital based on knowledge than in physical capital, and the growth rate of capital investments based on knowledge is steadily outstripping the growth rate of investments in physical capital, and this transition, naturally, entails a change in the focus of competition, which is increasingly aimed at obtaining a competitive advantage stemming from knowledge-based capital. That is why we see a growing rate of investment in capital, based on knowledge. The competitive advantage provided by capital, based on knowledge is expressed in the form of innovations that cover all technological, design, organizational and marketing information used for commercialization of new products, services or processes.

2. The WIPO study showed that almost one-third of the value of manufactured goods sold around the world was based on "intangible capital", such as brand, industrial design and technology. **"Intangible capital will increasingly determine the well-being and fate of firms within the framework of modern global production-marketing chains"** (WIPO Director General Francis Gurry). This amount is about 5.9 trillion. US dollars - shows that intangible capital accounts for twice as much of the value of manufactured goods as it does for buildings, equipment and other forms of material capital. It also confirms the growing role of intellectual property rights, which are often used to protect intangible and related assets in the world economy.

Let's emphasize some of the conclusions made in the World Intellectual Property Report (WIPR) 2017:

- In the period 2000-2014, intangible capital accounted for an average of 30.4 percent of the value of all sold industrial goods.
- The share of intangible capital increased from 27.8 percent in 2000 to 31.9 percent in 2007, but since then it has remained almost unchanged.
- The total income from intangible assets in the period from 2004 to 2014 grew by 75 percent in real terms, amounting to 5.9 trillion US dollars in 2014.
- The three commodity groups - food products, motor vehicles and textiles – accounted for almost 50 percent of all income generated by intangible capital in global value chains.

The report notes for "converting raw materials into parts and components, assembling final products and delivering them to the end consumer involves supply chains that span an increasing number of economies

across the globe. These chains are in development, they lead to economic growth and integration of economies, and contribute to the globalization of production.

Intangible capital – notably in the form of technology, design and branding – permeates global value chains in important ways.

The research shows that pre-production and post-production stages play an increasingly role compared to the production stage and they form a large share of the total cost of production. It is these stages that reflect intangible capital – in the form of technology, design and brand values, as well as worker's skills and managerial know-how.

In this regard, the study emphasizes that of the three factors of production - labor, intangible capital and material capital in the formation of the value of the main component is the intangible capital, twice the share of material capital.

3. Another important transition, explaining the context of the functioning of modern IP, is a geopolitical transition from West to East. Francis Gurry's point of view is confirmed by factors introduced into the production of knowledge, as well as by the final results (While in 1994 Japan, China and Korea accounted for 7.6% of all international patent applications, in 2012 it is already 38%, which is more than the share of the EU or the USA).

➤ **Another transition**, as noted in the work of Francis Gurry "Re-thinking the role of intellectual property" is associated with the spread in the society of the original state monopoly on information and thereby, thanks to the Internet and social networks, the ability of society to influence politics. **All three transitions have**

occurred against a backdrop of globalization caused by the digital imperative.

- Another systemic problem is associated with the generation of colossal data sets taking into account the "Internet of things" and implies the existence of such ones that fall outside the traditional categories of the IP system. Therefore, for their protection, they often resort to **commercial secret**.

As Francis Gurry notes, "major online platforms like Facebook and YouTube are creating vast quantities of valuable data from their activities. This gives them, and indeed all those who hold such data stores, a significant economic opportunity. There are, however, many complex **questions coming to the fore about the ownership** (in the traditional sense) of those data. These **questions also touch on privacy and security issues**. For example, who owns a person's data, or the data generated by a person's existence? Do we need to redefine ownership in relation to these data, and the rights and obligations that attach to them?" In the opinion of F.Gurry, **"while some redefinition of property rights in relation to classes of data that fall outside classical IP categories appears inevitable**, any recasting of existing IP rights will depend on what policymakers want to achieve." Indeed, "if the goal is to encourage the collection and exploitation of data to enhance understanding of human health, policymakers will need to consider a range of questions. Do existing IP arrangements provide the right set of incentives to encourage this? Are additional incentives required? Does the behavior of "data collectors" need to be regulated? Laws governing trade secrets cover some of these questions, but our thinking really needs to develop around these evolving issues."

- Thus, the technologies that are creating these seismic shifts are **cross-disciplinary** – they touch on IP, ethics, privacy, security, and so on. Therefore, their implications for managing the international IP system are related to the fact that in the future they will dictate the form of the international architecture of IP and its management
- One of the systemic problems is the new business models of creating added value in the digital environment that provide reward to rights holders will encourage legal online trading. These models are developed within the framework of the concept of restoring the balance in the system of "Internet openness – copyright enforcement", which is now on the user side. In other words, legal trading or licensing should be carried out as simply as illegal use. In addition, as long as there is a discrepancy between the legal forms of content consumption and the expectations of Internet users, piracy will be aggravated, because these expectations are easier to satisfy with illegal than legal means. It is important to remember that it is impossible to reverse the technological advantages of one of the parties and the changes generated by them, and therefore it is necessary to recognize the inevitability of the event, not to resist them, but to achieve intellectual interaction with them. **The choice is one - or the copyright system will adapt to the natural advantages received by Internet users, or it will die.**
- The essence of the new approach, according to many experts, is to re-think exclusive rights and replace the prohibition function with a positive function of free use, i.e. the use of content on the Internet becomes free,

and restrictions on free use are removed. Such models are the open licenses of Creative Commons (CC), applied already in 54 countries of the world and, thus, prove their worth. Another variety of new approaches is also associated with free use, but with payment of a fee, i.e. with a compulsory (in relation to the right holder) license. These models are characterized by a difference in sources and rules of fee collection or compensation for rights holders. This position also corresponds to the purpose of copyright, which should not affect the technological possibilities for creative expression, and the resulting business models, nor does it seek to preserve business models created on the base of obsolete and dying technologies. The purpose of copyright in cooperation with any and all technologies associated with the creation and dissemination of works in order to benefit from the cultural exchange generated by these technologies. "Copyright should be about promoting cultural dynamism, not preserving or promoting vested business interests", as said Dr. F. Garry, Director General of WIPO.

- We emphasize that this approach will be effective provided that at least a combination of law, infrastructure, accounting for changes in the sphere of culture and the best business models.

III. Review of the status of enforcement of IP rights and statistics on the level of piracy and counterfeiting in the world and in particular in Azerbaijan

1. There are a number of sources on the base of which a picture can be drawn of the current scale of piracy and counterfeiting (we did not make our own estimates of piracy, except for Azerbaijan).

- It should be emphasized that information on the extent of piracy and counterfeiting is usually based on research funded by the relevant industries, and this often constitutes an "effort" to lobby the interests of industries with a free attitude to testimonies and lack of transparency in verifying the data.

For example, data from the RIAA (Recording Industry Association of America), MPAA (Motion Picture Association of America) and BSA (Business Software Alliance) on piracy and, in particular, annual estimates of losses from violations, information on lost jobs due to slogan attitude towards figures (due to their inaccuracy or impossibility of confirmation) have become the subject of criticism [Joe Karaganis "Rethinking piracy", Social Science Research Counsel, Media Piracy in Emerging Economies, 2011; Sanchez, 2008; GAO 2010].

"Preference for attention-grabbing numbers is inevitable," as Joe Karaganis notes, "when lobbying efforts govern the use of evidence. In the field of piracy, this slogan approach also drowns out the body of more cautious results of the industry".

In particular, IFPI (International Federation of Phonographic Industry) and ESA (Entertainment Software Association) do not estimate the losses of the

industry in money in their reports, but only characterize the cost of pirated sales at street prices. After 2010, and the BSA abandoned the criticized practice of "industry losses", and MPAA replaced the assumption of direct equivalence between pirated discs and lost sales in favor of a more complex assessment of "crowding effects", the RIAA focused on understanding behavioral changes in music consumption.

2.

- ✓ Separately, the information provided by the IIPA (International Intellectual Property Alliance), presented with a rich quantitative and legal analysis of countries, and the basis for the USTR Special Report 301 (Office of the US Trade Representative).
- ✓ I would also like to mention a small number of studies that reveal their data and description of the methodology, even if they rely in part on data or methods of other studies. These include the evaluation of the OECD (Organization for Economic Cooperation and Development), and the BASCAP (Business Action to Stop Counterfeiting and Piracy) carried out by its order, and funded by the International Chamber of Commerce.
- ✓ Note also that currently there is a shift towards online monitoring due to the significant growth of digital rights and along with this, researchers and, above all, independent organizations are increasingly talking about piracy not in exact numbers, but in general terms, and, apparently, this opinion is shared by state and international organizations.
- ✓ The International Chamber of Commerce (ICC) supported the OECD in Report "Economic Impacts of Counterfeiting and Piracy", in its final conclusion in 2007, establishing as the main concept, the notion of

economic harm and citing industry losses estimates. However, it is also noted here that "the full extent of piracy and counterfeiting is not known, apparently due to the lack of a methodology that can be used to obtain a sufficiently complete assessment".

- ✓ In 2009, the OECD, in book "Piracy of Digital Content", relied on narrow results studies and qualitative statements about the observed picture of piracy. In March 2010, the US Government Accountability Office (GAO) issued a report on losses from piracy and basically followed the OECD line without approval of specific calculations. Need for more research was discussed three days at the WIPO Advisory Committee on Enforcement in November 2009. This caution in the assessment of the level of piracy, we intend to follow, especially since after the adoption of TRIPS' conventional formulation, ie. a stable legal definition of the term "piracy", is not available, and in national legislation, and the blurring of the term is used deliberately, obscuring important differences between types of use without compensation, ranging from the illegal copying of a work for commercial purposes and to disputes about the boundaries of justified use and the first sale of digital goods.
- ✓ At the same time, it is important to emphasize that when assessing piracy, usually followed by the generally accepted rule that piracy levels in different countries are inversely proportional to broader socio-economic development indicators, such as GDP per capita, etc.

3. In this presentation, we use data on the scale of piracy and counterfeiting, prepared for BASCAP and INTA.

- ◆ We remind you that the BASCAP project (Business in dealing with counterfeiting and piracy), organized by ICC (International Chamber of Commerce) unites the global business community in assessing the level and counteracting piracy and counterfeiting. ICC cooperates with OCED, presenting research results in the field of piracy and counterfeiting, and by joining to INTA (International Trademark Association), supports its activities.
- ◆ In 2017, Frontier Economics prepared a study for BASCAP and INTA, which notes that as far back as 2011 Frontier's report for BASCAP showed that the volume of counterfeit and pirated products amounted up to 650 billion US \$ per year. Despite the efforts of the public and private sectors, the problem continued to grow and OECD / EU showed in its next report 80% increase in counterfeiting for the period from 2008 to 2013.

Thus, it is stated that **"the penetration of counterfeit and pirated products or theft of IP creates a colossal leak in the world economy - the displacement of billions from legitimate economic activities and the promotion of "underground economy", depriving the government of revenues for vital public services, increasing the higher burden of taxes, displacing hundreds of thousands of legal jobs and exposing consumers to dangerous and inefficient products".**

- According to the OECD estimates, in 2013, trade in counterfeit and pirated goods amounted to 2,5% of the value of international trade, or 461 billion US \$, that is, 80% more than according to OECD data in 2008.
- According to Frontier, the cost of international and domestic trade in counterfeit and pirated goods in

2013 amounted to 710-917 billion US \$. In addition to this, the global value of digital piracy in movie, music and software in 2013 (2015) was 213 billion US \$.

- **The table of the total evaluation of counterfeiting and piracy looks according to Frontier research (2017) for BASCAP and INTA as follows:**

		2013	2022 (forecast)
1.	Total international trade in counterfeit and pirated goods	\$ 461 billion	991 billion \$
2.	Total domestic production and consumption of counterfeit and pirated goods	249 - 456 billion \$	524 - 959 billion \$
		2015	2022 (forecast)
3.	Digital piracy in movies, music and software, including:	213 billion \$	384 – 856 billion \$
	- in cinema;	160 billion \$	289-644 billion \$
	- in music;	29 billion \$	53-117 billion \$
	- in software.	24 billion \$	42-95 billion \$
	The total value of counterfeit and pirated goods	923 billion \$ - 1.13 trillion	\$ 1.90 - 2.81 trillion. \$

– **Table of economic and social costs from counterfeiting and piracy (Frontier, 2017):**

	2013	2022 (forecast)
Displacement of legitimate economic activities	470 - 597 billion \$	980 - 1244 billion \$
Estimated reduction in FDI	111 billion \$	231 billion \$
Estimated financial losses	96 - 130 billion \$	199 - 270 billion \$
Estimated costs of crime	60 billion \$	125 billion \$
General economic and social costs	737 – 898 billion \$	1.54 – 1.87 trillion \$
Estimated loss in employment	2-2.6 million \$	4.2-5.4 million \$
The data of primary economic growth in the OECD in 2017	from 30 billion to \$ 54 billion	

As follows from the studies, the net loss of seats in 2013 from 2 to 2.6 million will increase according to the forecast for 2022 up to 4.2 - 5.4 million.

- According to the econometric model, which assesses the impact of changes in the intensity of counterfeiting

and piracy on economic growth, shown that for the 35 OECD countries, the slowdown will be \$ 30-54 billion in 2017.

Along with the above, we will make additional comments:

- According to studies, a range of products and goods affected by counterfeiting and piracy include luxury consumer goods (leather, etc.), conventional consumer goods (toys and pharmaceuticals), products for business, and spare parts and chemicals.
- There are differences in the geography of the prevalence of counterfeiting and piracy, and the EU has a wide prevalence of up to 5% of imports to the EU (\$ 116 billion) in 2013.
- There is growing counterfeiting and piracy in international trade: according to OECD's estimates, in 2008, internationally traded counterfeit and pirated products accounted for up to 1.9% of global imports (\$ 200 billion). The annual estimated growth of 18% is probably partly due to the continuing priority in the field of IP crimes and the lack of additional resources allocated to ensure compliance with IP rights after the 2008 data. Other factors relate to the revival in trade after the 2008 crisis and the growth of electronic trade.
- The cost of internal counterfeiting and piracy in 2008 was \$ 140-215 billion, in 2011 - \$ 193-354 billion, which implies that in 2013 this indicator was approximately 2 times higher (however, here need caution in assessments).

4. Let's stop on digital piracy.

- P2P is the most popular method of piracy in movies, and BitTorrent is today the largest P2P network. According to estimates, 47.8 billion illegal downloads

of films in all forms of digital movie piracy were registered in 2015.

- In general, the global music industry has not changed much - in 2011 (\$ 14.8 billion), and in 2015 (\$ 15.0 billion), but there have been significant changes of another kind, namely digital revenues for the first time surpassed conventional; In addition, streaming platforms expanded (tripled between 2013 and 2015 and amounted to \$ 317.2 billion). For comparison, digital downloads amounted to 1.0 billion singles and 0.1 billion albums, and total physical retail sales increased by only 0.1 billion in 2015. The share of total music revenues on the Internet from streaming increased from 9% in 2011 to 34% in 2015.
- Interestingly, but the fact that streaming broadcasts, on the one hand, overshadows the sale of music (accessibility), and on the other - destroys musical piracy, as it satisfies the demand for cheap and even free convenient access to music.
- According to EUIPO's data (May 2016), music piracy caused a loss of 5.2% revenue (170 million Euros) from the registered music industry in Europe, the loss of the EU economy from sales amounted to 336 million Euros and caused a loss of 2155 jobs ~ 63 million Euros in government revenues. (Note that IFPI criticized the EUIPO methodology, believing that the losses were underestimated).

The following table shows the IFPI's estimates of the "contribution" to piracy in terms of tracks:

	% of tracks
Stream ripping	9%
BitTorrent	72% (with 22% of all downloads -

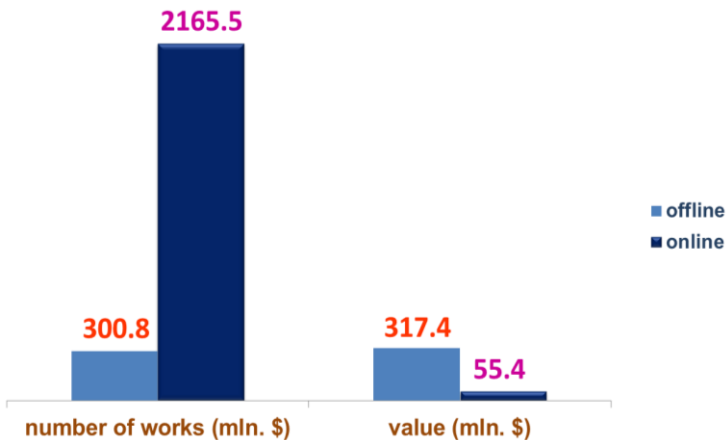
	singles, and 78% - albums)
Lockers	16%
MP3 sites	3%

In general, BitTorrent, despite the emergence of new pirate forms, is the leader in music downloads, and in 2015 this was a volume of 19.7 billion downloads of tracks. 27.4 billion illegally downloaded tracks by all forms of musical piracy were registered in 2015.

- ❖ Consumers spent \$ 444 billion on software worldwide (2015). At the same time sales of physical software decreased, and digital - increased. According to the BSA, the cost of unlicensed software in the world has grown from \$ 40 billion in 2006 to \$ 52 billion (the highest was in 2011-2013 - \$ 63 billion). Total unlicensed maintenance around the world is 6% of the installation license in 2015, the growth here is 39% or 52 billion \$. The BSA's estimates shows a reduction in software piracy rate by 10% in 4 years, which creates a new economic activity of \$ 142 billion, 80% of which will be a direct benefit for the software industry. IDC (2013) estimates that during a year, consumers will spend 1.5 billion hours on malware from counterfeit software, and direct costs amount to \$ 114 billion.
- ❖ According to **IIPA's information on piracy on the Internet and the mobile network**, Internet trading of copyright products and services is a major component of global digital commerce. In many countries, due to new services, widespread piracy benefits violators, prevents the growth of legitimate services in global markets and limits their market opportunities. IFPI-Ipsos research in 2016 showed that one in five (19%)

of Internet users downloaded music by violating of rights.

- ❖ According to the **Advisory Committee on Enforcement of the WIPO (November 23-25, 2015)**, in 2013 the volume of works pirated through online channels amounted to 2.1655 billion works, and on offline channels - 300.86 million. In fact, the amount of online piracy is 7 times higher than the scale of offline piracy. At the same time, the turnover of the online pirate market was \$ 55.4 million, while the offline pirate market was \$ 317.4 million. This difference is explained by the fact that a protected work can be played online very cheaply, while offline playback on CD, DVD or other media entails various costs such as production costs, implementation costs, margin, etc.



5. Conclusions.

- Counterfeiting and piracy is a form of theft associated with the illegal acquisition and use of intellectual property. Thus, the economic and social costs of counterfeiting and piracy are similar to those, which

are associated with other types of theft (for example, theft of personal values). Counterfeiting and piracy divert private and public resources from their more productive destination, and the illegal acquisition of intellectual property from means to protect intellectual property.

However, economic costs far exceed the traditional costs of theft.

Firstly, they reduce the return on innovation, harm both the innovator and the user. The economic costs associated with the erosion of intellectual property through counterfeiting and piracy are particularly serious in a knowledge-based economy.

Secondly, while the classic analysis of theft of property treats theft as a carry-over, and therefore is not in itself worth the expenses, - in practice, such an approach is invalid in the case of counterfeiting and piracy and this is determined by the close relationship between counterfeiting and other types of criminal activity. In other words, counterfeiting and piracy are "value", not transfer, because they stimulate other "expenses", i.e. activities that adversely affect social welfare.

Thus, counterfeiting and piracy are specific "bad" economic and social phenomena and their measurement is important.

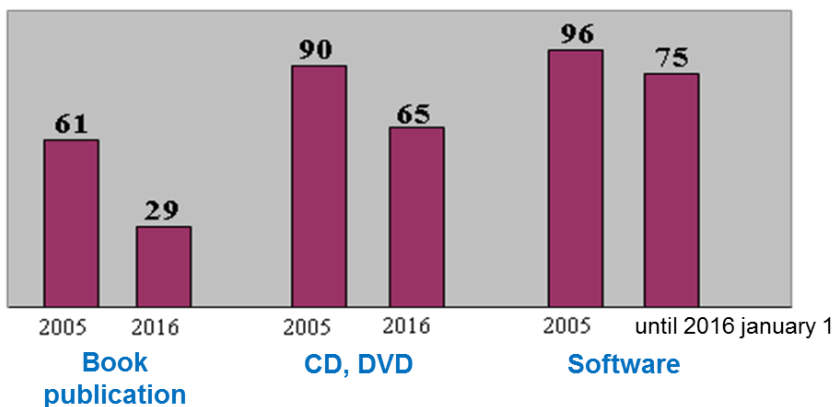
The destruction of intellectual property rights weakens the incentives for innovation, and in the long run affects economic growth (since innovation, technological progress and productivity are interrelated).

6. Enforcement of rights and formation of intellectual property culture in Azerbaijan.

The enforcement of copyright and the formation of an intellectual property culture is constantly at the center of

the Agency's attention; in cooperation with the relevant state bodies, measures are being taken to strengthen the fight against plagiarism and reduce piracy in the country, and monitor and analyse the situation in the country. In accordance with the Law "On Enforcement of Intellectual Property Rights and Fight against Piracy", works are underway to application of control marks, stamped to copies of objects related to copyright. Only in 2016 18,400 control marks were issued, and by the beginning of 2017 the appeals from more than 20 institutions were at the stage of consideration, round tables were held on the topic "Plagiarism in the texts of scientific, educational and artistic works and ways of countering plagiarism " in cooperation with the Ministry of Education of the Republic of Azerbaijan, anti-plagiarizing search information systems were implemented on initiative of the Agency and relying on international experience.

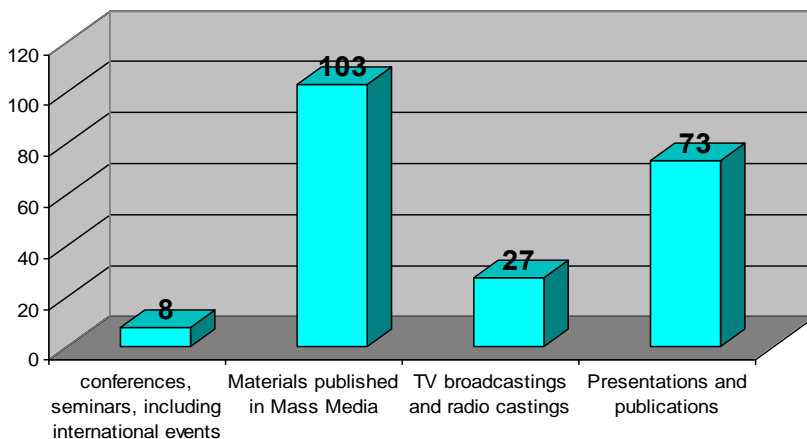
The level of the piracy for 2005-2016 years presented in the picture below. Thus, the level of piracy - in the book business fell from 61% to 29%, in the audio-video products market - from 90% to 65%, in software - from 96% to 75%.



- ❖ The role of the Anti-Piracy programs and the Agency's Hotline (phone No. 960), as well as "Legal Consultation", which works on a voluntary basis and provides services to the authors and other rights holders in the field of intellectual property law, is significant in enforcement of rights.
- ❖ In particular, in 2016, the Agency considered more than 1,450 requests and appeals, authors and legal owners were assisted in drafting legal documents, Agency staff participated in 30 various court hearings, 15 expert agreements on copyright were prepared on the base of requests of judicial bodies and right holders.
- ❖ Work is continuing in the field of legal education. With the Agency's organizational support, 8 events, including international ones were held in 2016, more than 100 informational and educational materials were published in the media, dozens of stories and programs devoted to intellectual property and copyright were broadcasted on TV and radio channels. About 75 presentations were presented at the events organized by the Agency with the participation of specialists, international experts, historians, scientists and representatives of NGOs, in its turn, the representatives of the Agency made presentations in more than 10 international events.
- ❖ Works are actively carried out to publish and disseminate literature of enlightenment among the population. In 2016, 6 books, more than 20 brochures and booklets were published, including: "Model Regulations on Intellectual Property Policy at Universities and Research Institutions"; "The role of the Copyright Agency in supporting intellectual property and research activities at the universities of

the Republic of Azerbaijan (innovative development and ways of commercializing technologies at universities (scientific institutions)", "On Intellectual Property Policy at Universities and Research Institutions of the Republic of Azerbaijan", textbooks "Copyright and related rights", "Intellectual property in the digital economy", etc. 7 international conventions, contracts and treaties, regulations and legal documents in the field of copyright were published and distributed during the events.

- ❖ In general, in 2016, the Agency issued 13 titles of books and brochures and 50 titles of presentations in the book version, multimedia manuals "Enforcement of intellectual property rights", "Copyright", "History of copyright", etc. were reissued. The Agency's publications were demonstrated during various presentations and events.



7. The negative impact of piracy and first of all, digital piracy affects the collective management of property rights.

- According to the CISAC report published in 2017 (for 2016 data), global collections amounted to 9.2 billion Euros, an increase of 6% in comparison with 2016, and includes royalties of more than 4 million creators for the whole world (2016). **Moreover, digital income continues to grow, increasing by 51% on annual estimation.** In terms of the repertoire of collective management, the largest share falls on music fees (8.006 million Euros), which amounted to 87.4% of all collections and grew by 6.8%. The collections for audiovisual works amounted to 578 million Euros, which is 6.3% of all fees, with growth of 0.8%. The collections for literary works rose to 208 million Euros, which is 2.3% of global collections, with an increase of 5.3%. Dramatic and visual art of collections decreased slightly, amounting to 190 million Euros and 174 million Euros, i.e. 2.1% and 1.9% of global collections with a corresponding decrease of 0.7% and 4.2%.

These datas showed that the medium average of world population per capita is 1.48 Euros and increased compared to 2015 (1.43 Euros), and in Europe and Canada / USA, the figures far exceed the global (5.79 Euros per inhabitant).

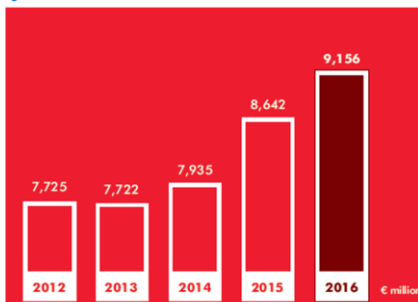
Global numbers on collections (royalty):

General world collection (fees or royalty) CISAC in 2016



Increase of world collection of CISAC members was 6% or 9,2 billion euro in 2016

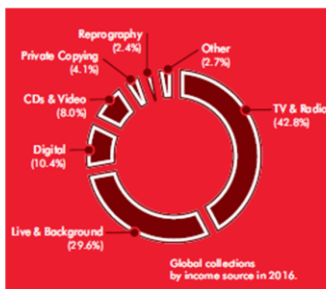
Dynamics of world collection for 2012-2016



Collection of CISAC members increased to 18,5% for 2012-2016. A significant part of this growth can be explained with sudden increasing of number of digital collections which compensated decrease in other directions (groups)

Global Repertoire Growth:

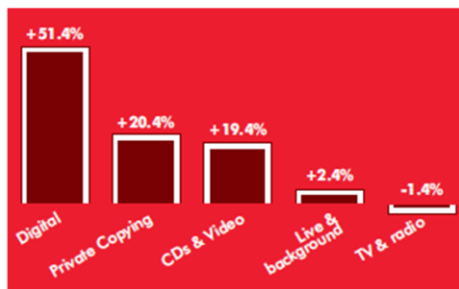
TV and radio collection lead, digital hits are 10%



Income from sources of world collection 2016

TV and radio broadcasting is the largest source of collection all over the world – 42,8%. Despite of quick growth of digital last years, it was 10,4% of general number of world collection as before.

Digital technologies help global growth



Fees of digital collections, although a small segment, dominates the regions all over the world. Digital collection increased to 51,4% in 2016.

Source: CISAC Report 2017

- ✓ **An important conclusion of CISAC** is that streaming has an impact on global royalty collections, but the problem is that Authors' revenues, however, are not sharing in the digital boom in the way they should. While the jump in digital collections is encouraging, they account for only 10% of global royalty collections. The fact is that the revenues are there; but the sad truth is they are benefitting digital services and not creators (digital collections increased 51.4%). This implies the need for legislative reforms that correct the fundamental injustice and unacceptable imbalance of the market. There is a critical need for legislative reforms to correct this fundamental injustice and unacceptable market imbalance.
- ✓ **The report states that**, "there is a fundamentally unfair misallocation of revenues in the digital market today. Those who make available content generate a significantly larger share of the revenues than those who create, invest and publish it. Often those entities refuse to pay anything to the creators. The overall result is devastating to the creative sector. While consumption of creative content is seeing explosive growth, little is being paid back to creators in return."
- ✓ **According to the report, at the heart of the transfer of value are user-generated content (uGC) services, which are the largest on-demand source of music. Revenues being returned to creators by these services in the digital market are disproportionately small.**

8. Internet sites are the main source of illegal use of intellectual property on the Internet. Illegal (pirate) materials are placed through the site, regardless of whether it was made by the site owner or by third party – the users. And the materials are disseminated to the

public, their illegal distribution without the permission of the right holder through the Internet site.

Experts identify five main types of pirate sites, including:

- **Link sites** - which do not store prohibited information on their server, but provide a link to the UGC or DDL site where you can already download or watch the movie.
- **Online sites.** These include internet-resources that place video content on their own pages that is viewed online and violates the copyright of their owners. Such sites do not often store files on their servers that violate copyright, but only place the code of source sites. In popular videohostings, which in most cases provide the program code, which allows visitors to view the video freely in real time and free of charge.
- **User Generated Content sites (UGC).** UGC are sites that store videos uploaded by users and provide an opportunity for other users to view this video online, i.e. the file itself is created by the user, but it is stored on the server of the UGC site.
- **Torrent sites using the so-called P2P (peer to peer) technology.** P2P are sites that provide links to torrent files. After downloading a torrent file from this site, then you can download the file using a special program due to the presence of this file on the computer of other users. The more people store this film on their computer, the faster the download speed of the corresponding file.
- **File-sharing resources (Direct Download Link, DDL)** - sites that store a user-uploaded file. The link to the materials is usually distributed by the person who uploaded the file. For greater speed, users are encouraged to buy premium accounts, which remove

restrictions (or part of them) on the speed and volume of downloading and respectively storing files.

- **Own servers** are the sites that place files on the user's own server. The peculiarity of such sites is that the file itself is stored on its own server. In this case, if the owner of the site refuses to delete the file, then to achieve its removal is extremely difficult. **Owners of pirate sites with their own server - these, we can say, are professional pirates.**
- **The main source of income for pirate sites is advertising income, the sale** of paid accounts, the distribution of works for a fee (via SMS payments and other types of cash receipts from consumers).
- Legal science and court practice agree that the domain administrator is the person who should be responsible for the materials accessed through the relevant Internet site. At the same time, in the practical application of this fair and justified approach, conflicts arise, the causes of which are often the deliberate counteraction of pirate sites to the actions of right holders aimed at implementing the legal instruments for the protection of intellectual property rights.
- Pirate sites often take a position according to which it is the users, and not the domain name owner, who should be responsible for the violation of rights, as the materials are placed by third parties (the users). Courts faces with these attempts to "hide". We believe that the blocking of pirate sites and the removal by the search links is the most effective tool for them.

IV. Looking into the future

(about the Agency's measures on the formation of the respectful attitude to copyright)

1. Background.

- ◆ Back in 2009, the Agency proposed a fundamentally new **business project for digital rights management on the Internet**, as well as a **project on using control marks for copies of distributed objects of copyright**, taking into account the world experience.
- ◆ European experts became interested in the project and in the next 1.5 years, together with the largest copyright specialists from France, Greece, Germany, Spain, Hungary and other countries, the Twinning project, which had a great resonance, was implemented. Azerbaijan's position met the WIPO's support and for the first time since Azerbaijan joined this organization in September 2010 the Azerbaijani side made a presentation "Copyright in Azerbaijan (Opportunities and Prospects)" in the presence of the heads of all IP offices of the world.
- ◆ Later, during 2011-2014, the project was active discussion at four international conferences, two of them were held together with the WIPO.
- ◆ The representative of Azerbaijan was invited by the organizers of the Internet Governance Forum from Eastern Europe (Baku, 2012) as speaker on the theme: "Copyright and the Internet: the clash of interests and the search for a compromise", and also spoke at the Baku Conference - First Platform Exchange on Culture and Digitization in 2014 within the framework of Azerbaijani chairmanship of the

Committee of Ministers of the Council of Europe with the report "Digitalization of culture and digital copyright".

- ◆ Presentations on this topic were made at the fifth International Scientific Conference "Management and Optimization" in 2015.
- ◆ The results of the work carried out were also reported in the international symposium jointly organised with the CISAC and IFRO (presentation "Collective management and digital environment: the experience of Azerbaijan in connection with new challenges"), as well as in the international seminar "Restrictions and exceptions in copyright" jointly organised with WIPO in 2015, in 2017, presented at the joint Azerbaijan-US symposium (presentation "The role of IP in the development of Azerbaijan").
- ◆ Generally, on this subject, a monograph has been prepared and seven scientific articles have been published in authoritative publications.
- ◆ I will also note that the works carried out have a solid scientific basis and were supported by the Science Development Foundation under the President of the Republic of Azerbaijan.
- ◆ Moreover, most importantly, thanks to the attention and support of the President Ilham Aliyev, as it was stressed, the creation of the system was reflected in the "Azerbaijan 2020: Look into the Future" Development Concept, approved in late 2012.

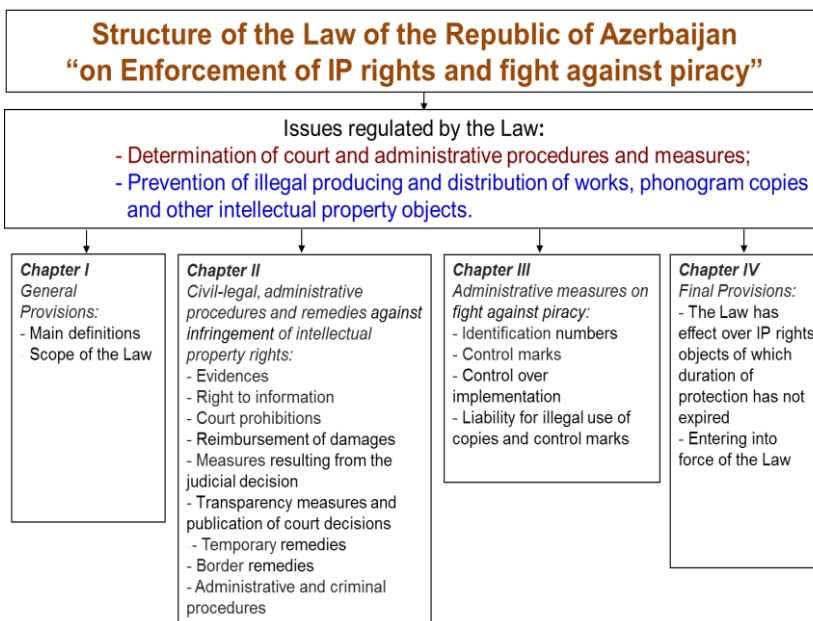
2. Developed and implemented projects have a legislative and regulatory base.

- ✓ In 2012, the Law "On Enforcement on Intellectual Property Rights and Fight against Piracy" was adopted, the execution of which began according to the Decree of the President of the Republic of

Azerbaijan from October of that year. Five government resolutions, ensuring the implementation of provisions of the law, as well as additions to the Civil and Criminal Codes and the Code of Administrative Offenses were adopted during 2013-2014.

- ✓ Below is a conditional block diagram of the Law consisting of 4 chapters and 17 articles, the subject of which is not the creation and use of IP objects, but the provision of procedures, activities and legal means directed against IP infringements. Here we are talking about civil, administrative and criminal legislative means, supplemented by measures to preserve evidence, information law, measures resulting from court decisions, interim measures, publicity measures, etc.
- ✓ Along with this, third chapter provides for special administrative measures to fight against piracy.
- ✓ The law meets with the requirements of the EU Directive on enforcement of intellectual property rights and covers the relevant TRIPS standards.

Law of the Republic of Azerbaijan "On Enforcement Intellectual Property Rights and Fight against Piracy"



3. According to foreign experts, an important achievement of the Agency is the created digital organizational and technical system for the personalization of control marks stamped to intellectual products sold in the distribution network that are objects of copyright. The uniqueness of this project is that it is equipped with a digital system of issuing marks in cooperation with the software package "Track & Trace" for smartphones that allows to remotely determine the legitimacy of marks and trace their life cycle. The absence of such mark entails heavy fines. Control marks are stamped on books, audio, video carriers (CD, DVD) and software-carriers. The creation of the system, as

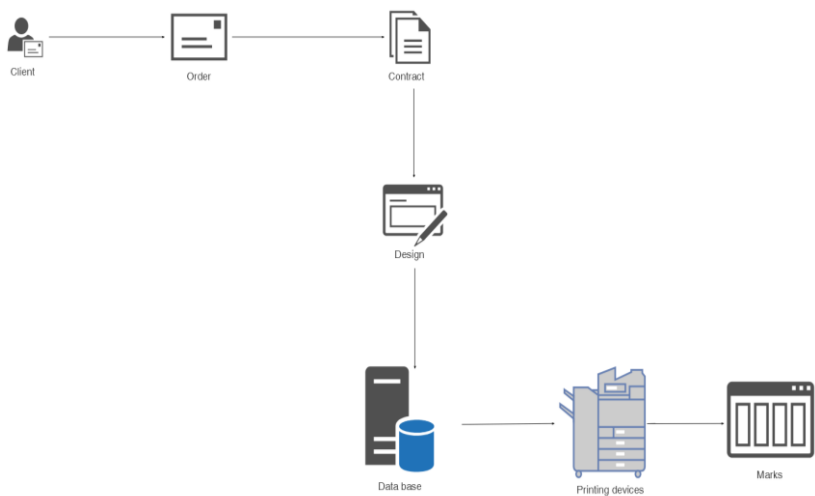
noted above, follows from the Law "On Enforcement of IP Rights and Fight against Piracy", the relevant legal acts, i.e. has a legal basis, but in interaction with the modern capabilities of the Internet.

- ◆ The basis of the control mark is a hologram equipped with 15 methods of protection, i.e. this is a small label made of metal film, which is destroyed during secondary use. The control mark is prepared on this basis, having a unique code and series, and is equipped with encrypted information.
- ◆ The hologram becomes a control mark through personalization procedures carried out on special printers and laminated in the IP Center operating under the Copyright Agency
- ◆ The absence of control marks on copies of distributed copyright objects, as well as their forgery, entail administrative and criminal consequences.

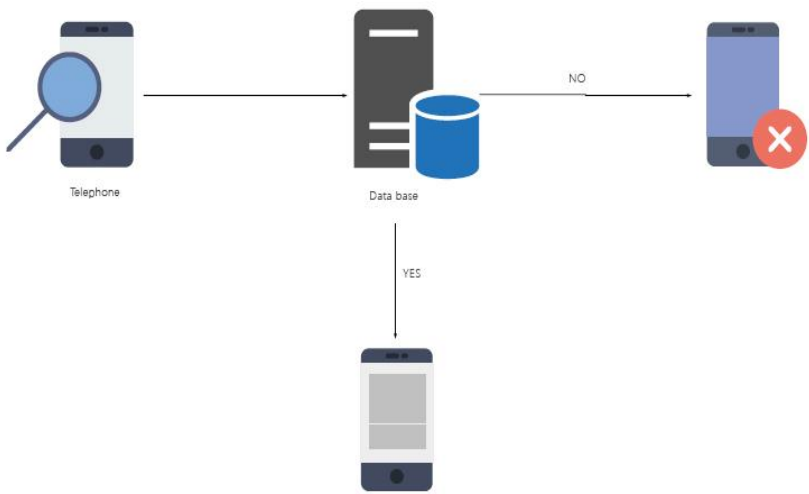
Below it is shown generalized schemes for the personalization of holograms and the registration of control stamps, as well as a scheme for checking control marks by mobile devices.



PERSONALIZATION OF HOLOGRAM AND ACCOUNT OF CONTROL MARKS



CHECKING CONTROL MARKS BY MOBILE DEVICES



4. During developing of a project related to digital rights management on the Internet, it was taken into consideration that the mismatch of interests in the system "Copyright Enforcement - Internet Accessibility" leads to a conflict between authors, right holders and users and requires a search for a compromise solution.

- In the system "Internet Openness – Copyright Enforcement", users of the idea of Internet Openness are Users, for whom the free use of works is most preferable; the authors of free use of content with payment of remuneration are to a greater extent Authors, and Right holders, being business partners of the authors, most prefer toughening of requirements for securing rights (researches confirm the above).
- In the development of the Azerbaijani project on Internet rights management, resorting to modern mathematical methods from game theory, the relationships of three actors - Authors, Right holders and Users - were theoretically analysed and as a result it was obtained that in the coalition game of three persons the most stable compromise is achieved with free use of content with payment of compensation. Although this does not exclude the use of two other models, examples of which are provided by statutory norms on the blocking of violators' websites or open CC licenses.
- The preferred strategy for free use of content on the Internet with payment of compensation is the theoretical platform of the digital rights management system being created in Azerbaijan.
- Features of collective management of digital rights were also taken into account, due to the fact that the traditional division of copyright objects into types and

collective management of rights in a specific field loses its meaning and puts forward the task of a single (from one center) content management.

- Along with this, the close relationship of electronic commerce with migrated to the network of copyright objects, when copies are directly delivered to the customer for an individual price, require a re-thinking of the organization of collective management.
- Three possible forms of organization of collective management of digital rights were analysed, namely:
 - when a single organization, in accordance with the approved tariffs, controls the right to reproduce and the interactive right of "communication to the public" on the basis of licenses issued to users. This is the mode of "one-stop-shops" (a store with an expanded range, in connection with which associations of CMO are created);
 - the same mode of "one-stop-shops", but licenses are issued at individual rates, based on the index of the popularity of the object;
 - "one-stop-shops" regime with "on-line" licensing requires automation of the management process, provision of Internet access of the users of collective management organizations and availability of the entire content store in the organization with distinctive labels and DRM-system.

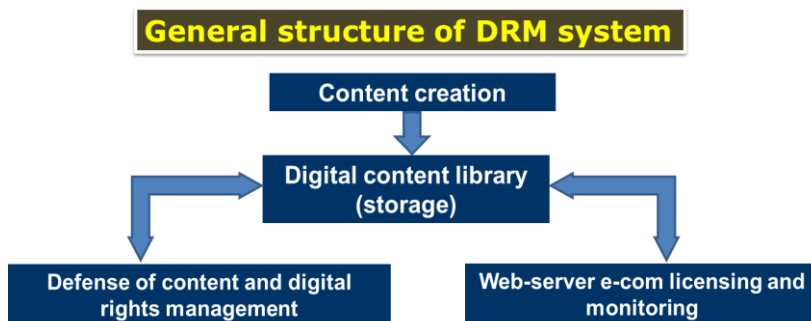
The final option from the above forms was chosen as the most effective one.

- ✓ **In addition, the question of the possibilities of using blockchain in the collective management system was also discussed.**

5. DRM system in Azerbaijan

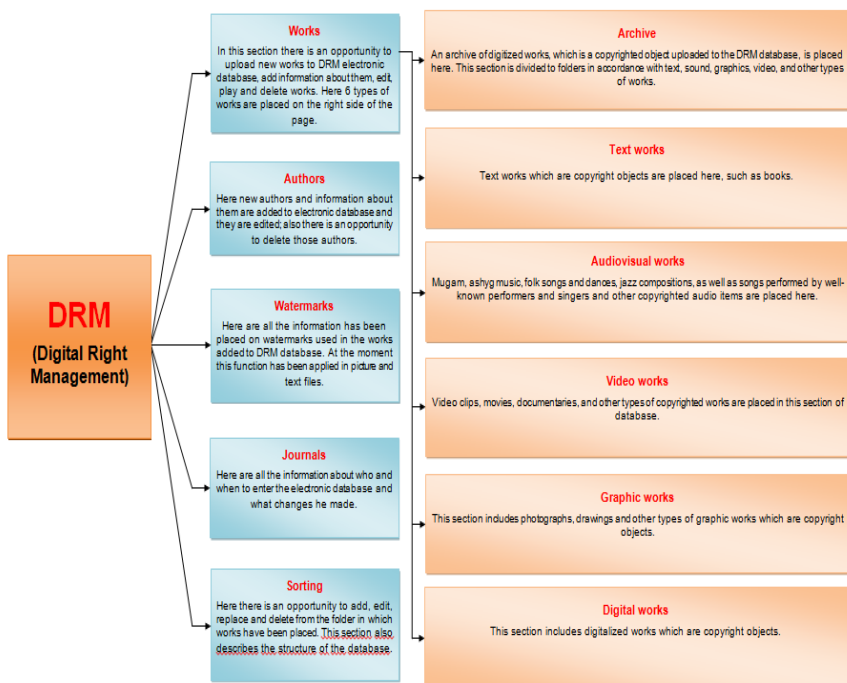
- ◆ Purpose and destination of the system:

- Creation of an information infrastructure (platform) that provides services based on the of digital content and registration, digital rights management and E-com, digital monitoring and detection of illegal use.
- Creation of conditions for transformation of the Agency into the National Aggregator of digital content on the intangible cultural heritage.
- ◆ DRM system has the following subsystems:
 - Online clearance and registration.
 - Content protection via Watermark.
 - Management of content on the base of digital content.
 - Monitoring and evaluation of use of content.
 - Implementation of E-sales.
- ◆ The system can be used both in the monitoring for the purpose of tracking the use of works (content), including the lawful and illegal use and ensuring the right holder's compensation, and in the E-shop regime with individual regulation of royalties. At the same time, collective management of rights based on the principle of "one-stop-shops".



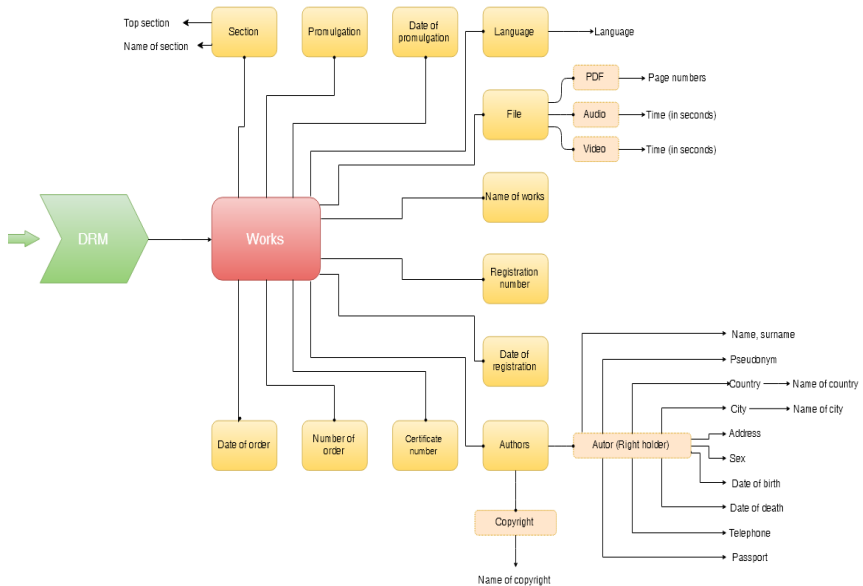
The most important part of the DRM system is the digitization and storage of works in the form of digitized content.

The presented diagram reflects the content of the database:

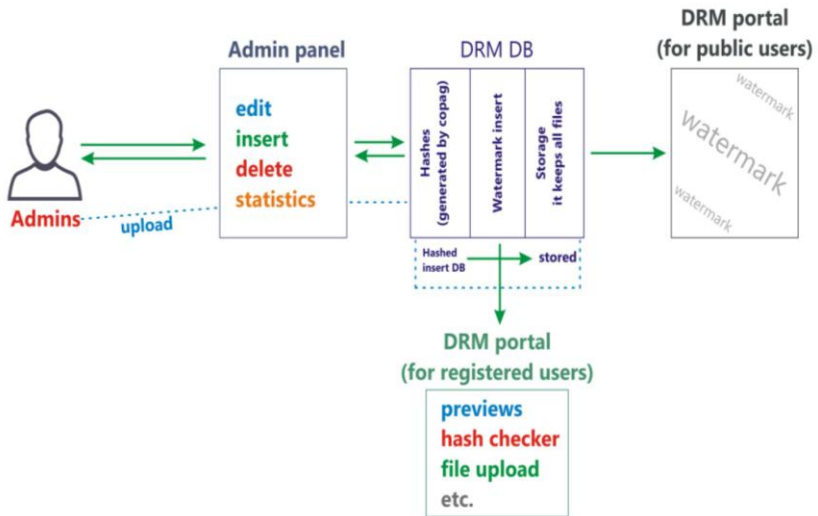
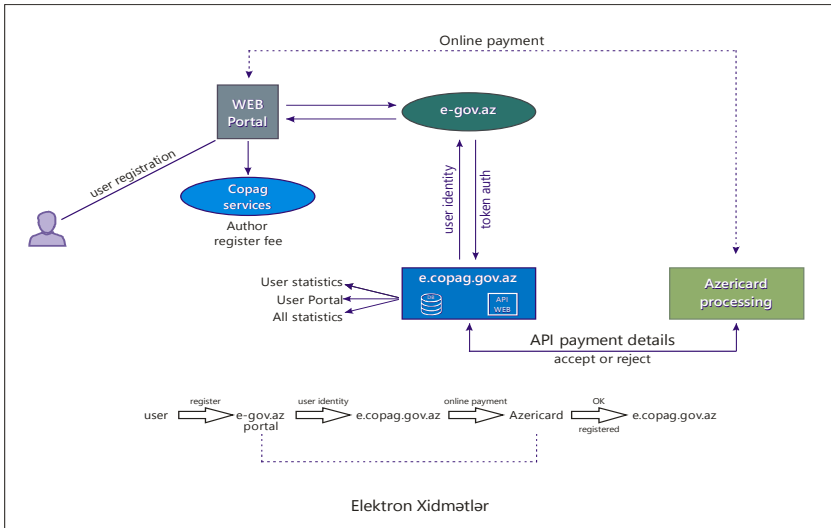


- Currently, more than 1900 works are stored in the database, including 584 text, 655 audio, 225 video materials, 114 photos, There is information about 411 authors and rights holders. The database continues to be grown. In addition, taking into account the possibility of integration in the database on registration of works "Author", stored about 10 thousand of published and unpublished works.
- The following are structural diagrams reflecting the replenishment of the database and the procedure for applying watermarks:

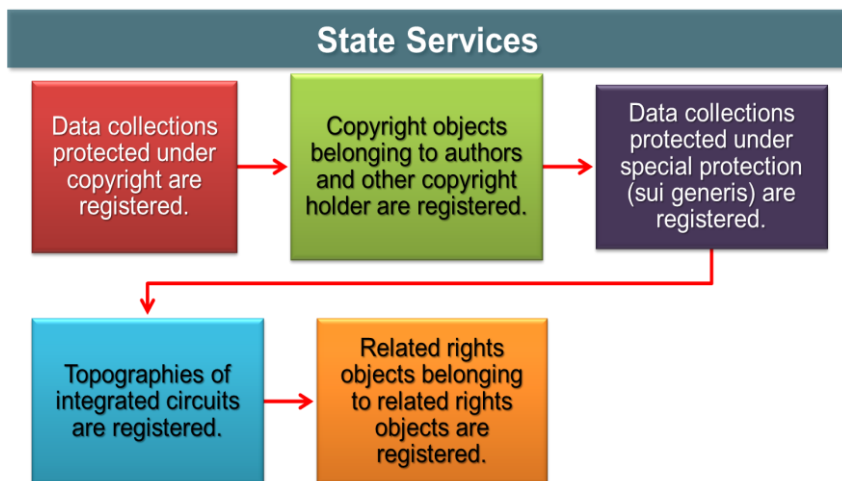
ADDING THE WORK (Filling the date base)



Watermark represents logo and writings (for example the name of site or organization) placed via special method on documents, pictures, videos, music and all files. Placing watermarks on these documents mean the first entity published that. Only the Copyright Agency may endorse the originality of the file.



Along with this, the Agency's information system integrated into the portal "gov.az", and below is a diagram of electronic public services.



6. About the further directions of work.

- ❖ The digital century has changed and is being changed a lot. The content that it has generated today is at the same time the main product and resource of the digital economy, just like a digital file - this is both the technology and the place of production. The context in which the IP functions in today's world is fundamentally different from the one in which it originated. In both the economy and society, the new context changes the state of IP, turning it into the dominant of a knowledge-based economy, an important tool of the digital society and a guarantor of the preservation of cultural heritage. The changed context of IP functioning equally requires a change in the way we think about IP and its role.

- ❖ It is for this reason that we are working on issues related to the decentralization of collective management, based on the possibilities for cooperation between the public and private sectors on the basis of exploring ways to use blockchain technology.

7. On the base of blockchain technologies, platforms can be created with the perspectives from the point of view of societies. As noted above, the distribution of digital content often do not receive innovations or updates, primarily because they are guided by a classic business model. For example, according to some experts, copyright laws serve to protect the interests of the industry, in fact, it seems, they do not understand the nature of the Internet. As a result, a number of awkward situations arise, when the interests of the traditional industry face the right to information and access to culture. As a reflection of this problem, in the last decades there have appeared many movements of "free software", "open source" or "copy left". All of them use copyright as a means to overcome the limitations traditionally imposed by the field of copyright on the dissemination and development of knowledge.

The blockchain technology opens up many opportunities for the registration and dissemination of intellectual property without intermediaries. Decentralized distribution of P2P digital content is a new paradigm shift in the digital culture era.

In the case of IP, the blockchain is a method of data storage or a digital register of transactions, contracts and property rights, etc. - everything that needs a separate independent record, and, if necessary, verification.

a) It is based on P2P networks and digital information is distributed, but not copied. This is a new kind of

Internet, or rather a return to what the Internet should have been: no one else's powers, powers are proportionally distributed among all participants.

b) The registry is not stored in one place, it is distributed, and any user of this network can have free access to the current version of the registry, i.e. the registry is absolutely transparent for all participants.

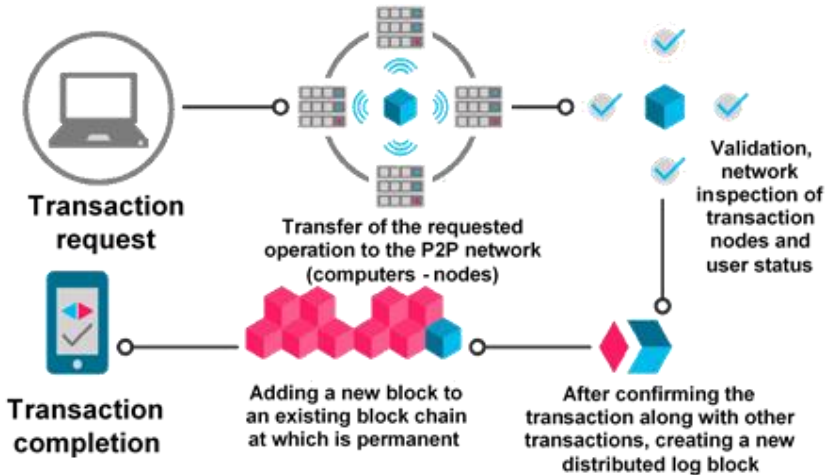
c) Blockchain is a chain of transaction blocks, built according to certain rules. In the "block" digital records are combined, they are connected cryptographically and chronologically into the "chain" by means of complex mathematical algorithms, each block is associated with the preceding one and contains a set of records, and new blocks are always added strictly to the end of the chain. Encryption (hashing) is performed by computers of this network and if the same result is obtained, then the block is assigned a unique digital signature. After updating the registry and creating a new block, it can already be changed, i.e. it's impossible to forge it, and you can only add new entries. The registry is updated in all computers of this network at the same time.

d) The distributed nature of the blockchain data makes hacking almost impossible, because you need to access the copies of databases in all computers on the network. In addition, the technology allows you to secure personal data, as the hashing process is irreversible. If the original document or transaction is later changed, they will receive a different digital signature as a result, which signals a mismatch in the system.

e) **So, the conclusions:** the database of the blockchain is not stored in any single place, there is no centralization, copies are stored in all at the same time (in all computers of the blockchain network) and are updated everywhere, if it is done on at least in one computer.

Thus, this is transparency, since the data is embedded in the network as a whole and by definition is public, as well as indestructible, since changing any unit of information in the blockchain requires enormous computing power to substitute information in the network.

The general scheme of the work of blockchain:



Thus, the block chain is a decentralized P2P platform.

P2P technologies radically changed the music industry in the late 90's due to the appearance of the network Napster, and later - BitTorrent. A new stage of changes in the scale of the entire industry is caused precisely by the spread of blockchain technology.

What blockchain projects are known in the field of IP and what are their features?

- **The project DotBC** (author - Benji Rogers), where the blockchain is executed to create an open-source environment, and popular formats of digital distribution are replaced with a new format with the bc (dot blockchain) extension, which can not be reused by the

ripper, which eventually allows the digital registry track copyright and use rights.

- **The DDEX project** (Digital Data Exchange) provides standardization of meta-data deliveries.

- **The OMI project** (Open Music Initiative) is an operator platform that follows the creators of music and the copyright owner of it.

- **Mediachain project** (co-founded by Jesse Walden and Denis Nazarov), developed within the framework of the start-up and operates while storing images in a test mode. Allows to carry out both protection of copyrights, and to search author of an original material and works with such resources as Instagram with the instruction of the author of the image at its repost other users of a network. It is used for music and related industries.

- **Blockai** – a Californian startup project that protects copyright.

- **Ascribe Services** - an American project, also executes the blockchain technology.

- **Blokur** – American project, excluding intermediaries and quickly delivering the funds of performers.

- **IBM Blockchain**, on the basis of which ASCAP (USA), SACEM (France), PRS (the United Kingdom), - the three leading world collective management organizations have teamed up to study the performance in the music show business. According to the point of view of the creators, the digital market requires real-time reporting and thanks to the blockchain it is possible to effect payment of royalties on time and accurately. For example, for music, two main methods of its identification - the international standard recording code (ISRC) and the international standard music code (ISWC), which facilitate the tracking of the reproduction of works, are

connected and the blockchain makes the process of providing information more qualitative and quick.

- Along with this, the following blockchains for music industry are known: Bittunes platform, Ujo Music platform, PeerTracks platform, Stem blockchain start-up, Colu project, Waves blockchain platform, Smilo start-up, etc.
- In conclusion, we will focus on the **IPCHAIN project**, which is being developed jointly with the Skolkovo Foundation and the Russian collective management societies, and is aimed at launching a single platform for the management of IP facilities (Skolkovo, Russian Authors' Society, Russian Union of Right Holders, Russian Organization for Intellectual Property, Higher School of Economics, Saint Petersburg National Research University of Information Technologies, Mechanics and Optics, Institute for Economic Strategies and "New Century Bank"). The project is created on a single Iphub technology platform that makes information about various IP objects (copyright and related rights, patents, trademarks, etc.) available, has an information exchange standard for connecting other rights holders to it. Moreover, the project allows the introduction of objects that are not traditionally considered in IP (complex three-dimensional, information models, digital descriptions of genetic editing, algorithms of artificial intelligence, etc.).
- **The aim: in the future to replace the outdated collective management system, in such way that the institute of mediation replaced by digital platform, will provide users with the opportunity to directly influence with content producers.** At the same time, CMOs participate in them with their

registries of rights to works and already developed rights management systems.

8. Azerbaijan project MHACHain:

- **MHACHain** – a platform based on blockchain technology based on the P2P network, envisaged for use in Azerbaijan, has **2 regimes of operation**, and its participants include users and copyright holders (authors).
- there are at least 4 tasks of using blockchain technology, namely:
 - act as a database of files, IP objects, offer quick remuneration payments, ensure transparency of the payment process and provide new owners with new sources of funding.

This is presented in more detail in the form:

Blockchain should allow creating a single and accessible to all the base of musical works. **The contact information of the copyright holders and the conditions for using the compositions can be easily obtained from the general register**, which will significantly simplify the process of data collection for the interested persons to obtain a license.

Blockchain should also allow optimizing royalties. Decentralized technology provides a high rate of micropayments and a low commission when paying royalties, including in a crypto-currency format. A "smart" contracts and agreements implemented on the blockchain, exclude from the chain of intermediaries.

Decentralized infrastructures should also promote greater transparency in the payment of royalties. The mechanism of consensus (the algorithm by which assistance participants of the decentralized network vote for the truth of this or that version of the blockchain under construction), the underlying technology of the

blockchain, provides verification of each payment transaction. The need for a trusted center or an intermediary is not available.

Finally, the blockchain should help create additional sources of financing for rights holders. Transparency in decentralized infrastructure can increase investor confidence. The cryptographic analogues of shares – tokens-issued on the blockchain contribute to the development of a more effective and understandable from the investment point of view the way of crowdfunding.

Finally, the rights holder does not lose control over his project, and investors understand that in case of their success they can count on the share of royalties.

a) Fully decentralized regime.

- ✓ In this version, the network is downloaded by the directories of the authors-right holders exclusively independently (with the fulfillment of the access requirements), and exactly the same users claim the use of this or that type of IP object by entering the P2P network with the blockchain technology (taking into account the access requirements).
- ✓ Content-platform on the blockchain itself monitors the observance of copyright of rights holders. The created content unit is published in the system, it is assigned a code that is automatically checked for uniqueness for all units of the blockchain system, i.e. the entire system is being updated after adding each new element. It is like, if Google update its search system, after the appearance of another new page. However, it is a lot, much faster, since all the data is not on any servers, like Google, but distributed among all participants of the blockchain system. **It is simultaneously everywhere and nowhere.**

✓ Thus, this regime does not provide for any intermediaries, including CMO, and supervisory functions may be exercised by a public authority. The platform in this case is decentralized, the storage devices do not work through a common server and thus any participant will be able to make a record, which after the verification procedure will be displayed for all network participants.

b) decentralized registry regime with centralized management:

Taking into account the availability of state registration of copyright in Azerbaijan, these functions are retained by the Agency, which will also perform the role of the Single Depository, which implement registration.

The difference from the traditional procedure, registration, including online registration, nowadays, the registration will be carried out through the blockchain network, and the deposit procedure will allow to confirm information about the registered object anywhere in the world without the participation of a third party (in this case the Agency).

At the time of depositing the author's work, an "image" of the object - the so-called hash is created. The hash is loaded into a distributed database, based on blockchain technology, which provides transparency of information by automatically negotiating each transaction that occurs in it. Blockchain allows creating many cryptographically confirmed copies that stored by all network participants, which makes impossible the substitution of the inserted data.

The record of the deposited object will be stored in the system indefinitely, and the fact of its creation will be able to check by anyone who wishes by the hash in the blockchain registry. Thus, information about the digital

copy of the object entered in the distributed registry will provide the author with an evidence base for the protection of intellectual property rights.

В) Information on IP objects, as well as information on their use will be concentrated on a single technological platform. To ensure this service, all authors and rights holders are invited to place their IP objects here and determine the limits and ways of using them. The right holder, who registered his catalogue along with the registration information and the required payment details, enters this information into the MHACChain network, and also contracts with the collective management organization to transfer the remuneration accrued to him, and this will happen automatically. Thus, global technology and informatization makes the system of individual rights management a priority.

The developed standard of information exchange will allow connecting its systems to the platform of other rights owners. The platform will work based on blockchain technology: it will not contain information about all objects, how they are used in the digital environment (on the Internet, on TV, in public places where there is the possibility of recognizing playable works, etc.), on the transfer of rights to objects. In the future, on the base of this platform, stock exchanges for the sale of rights can be created: the blockchain will allow tracking the use of objects and register transactions with them.

9. The conclusion.

- In blockchain technology, when objects appear, information about them is fixed so that blocks cling to each other, it is impossible to break the chain. And this is a guarantee of reliability and the ability of technologies to form a right. The level of technology

development is so high that it starts to systematically kill law and technologies create an opportunity for rights that have traditionally been used to make these technologies develop, simply being killed on the root.

Summing up, let us single out three global technological challenges to the existing IP system. **The first challenge** is that the emerging new knowledge becomes impossible to describe in legislative documents, because now information is fixed and transmitted in digital form, and traditional law works with textual information. An example is the complex digital forms of describing objects, that no IP office is able to formalize them.

The second challenge is connected with the fact that the right began to separate from the turnover of objects that it protects, if earlier with the transfer of material carrier - disk, costume, etc. - in fact, the rights were transferred, but now the objects are moved and output to the world with the help of special devices - the right is not required for this.

The third challenge should be attributed to the loss of authorship of objects in order to create something new, you need to use enormous amounts of information. A breakthrough into a new sphere is possible only when the author absorbs a certain layer of culture. Actually the author does not exist, there is a socio-author - society in many ways becomes an aggregator and a bearer of property.