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## DIFFERENT LEGAL ASPECTS OF THE INTELLECTUAL PROPERTY RIGHTS

### ABSTRACT

*Just like every human invention, intellectual property has two sides to it, on the one hand it allows businesses to be more productive and scientists to share research data almost instantaneously, on the other hand it grants criminals an additional tool to commit crimes and get away with it. The question is how such criminal behavior can be controlled because crime is hidden behind technology and innovations. Also cyberspace offers room for the entire spectrum of transnational criminal activity. Analysis of the comparative judicial practice in connection with intellectual property is of the exceptional importance for securing intellectual property rights in the territory of EU. The states who are the leaders in innovation and creativity establish strong legal mechanisms which provide the protection of intellectual property rights. It is generally accepted that only legal use of intellectual property can bring innovation and progress to a society. In Republic of Serbia adopted laws are, to the greatest extent, harmonized with the current both regional and international standards in the field of protection of intellectual property rights. Author deals with the criminal law protection of intellectual property and the importance of intellectual property rights as activators of global streams in EU.*

**Keywords:** *intellectual property, criminal law, piracy, digital currency.*

### 1. REASONS FOR IPR PROTECTION

Much has been written about the nature and meaning of IP rights but they can best be described as intangible property rights or rights in ideas. The people all over the world work daily to create a better world. They create products and services that improve the world's ability to communicate, to learn, to understand diverse cultures and beliefs, to be mobile, to live better and longer lives, to produce and consume energy efficiently and to secure food, nourishment and safety. Most of the value of this work is intangible—it lies in people's entrepreneurial spirit, their creativity, ingenuity and insistence on progress and in creating a better life for their communities and for communities around the world.

As a World Intellectual Property Organization (WIPO) publication explained:<sup>1</sup>“The history of the human race is a history of the application of imagination, or innovation and creativity, to an existing base of knowledge in order to solve problems. Imagination feeds progress in the arts as well as science. Intellectual property (IP) is the term that describes the ideas, inventions, technologies, artworks, music and literature that are intangible when first created, but become valuable in tangible form as products.” These intangible assets, often captured as copyrights, patents, trademarks, trade secrets and other forms of “intellectual property,” reflect most developed countries’ advantage in the global economy.<sup>2</sup>

Legal protection of the intellectual property has significant importance for modern states and it has both global and national components. Global economic aspects of the IPR protection includes fulfilment of all basic principles of the multilateral conventions and adoption in the national legislation. Due to the changes in modern economy and business strategy, new legal tools of protection are introduced.<sup>3</sup>The profit from intellectual property infringement is a strong lure to organized criminal enterprises, which could use infringement as a revenue source to fund their unlawful activities. When consumers buy infringing products, including digital content, distributed by or benefiting organized crime, they are contributing to financing their dangerous and illegal activities.

We are facing the digital challenge on the field of the infringement of the IPR. The Internet and other technological innovations have revolutionized society and the way we can obtain information and purchase products lowering barriers to entry and creating global distribution channels, they have opened new markets and opportunities for exports of information, goods and services, including enabling small and medium sized businesses to reach consumers worldwide. These innovations have also facilitated piracy and counterfeiting on a global scale.<sup>4</sup>

While the costs and risks involved in product development are high, the costs of product imitation or intellectual property infringement are generally low. Once a successful book is published, it may be replicated with little effort by photocopying, commercial reprinting, or unauthorized electronic distributions. A successful

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<sup>1</sup> *Intellectual Property: A Power Tool for Economic Growth*, WIPO Publication, No. 888, 2003, pp.10-11.

<sup>2</sup> Farah, P. D., Tremolada, R., *Intellectual Property Rights, Human Rights and Intangible Cultural Heritage*, Journal of Intellectual Property Law, 2014, pp. 21–47.

<sup>3</sup> Ryan, M., *Knowledge Diplomacy, Global Competition and the Politics of Intellectual Property*, Brookings Institution Press, Washington DC, 1998, p.12.

<sup>4</sup> Horan, A., Johnson, C., Sykes, H., *Foreign Infringement of Intellectual Property Rights: Implications for Selected U.S. Industries*, Office of Industries U.S. International Trade Commission Washington, 2005, p.21.

new software program may easily be copied by digital means and transmitted via the Internet. A drug approved by the government for marketing after extensive R&D and clinical testing by the developer may be duplicated with much less cost by others. One result of market exclusivity is that it permits the intellectual property right holder to demand higher prices.<sup>5</sup>

The aim of this paper is to investigate various aspects of the legal protection of intellectual property rights. Specifically, it is assumed that the intellectual property appears in different forms and as such is the subject to protection of many legal authorities. In particular, legal protection of the intellectual property is primarily provided by the right of intellectual property, which includes copyright and related rights as well as the industrial property right. A special form of the violation of intellectual property is performed by the internet and computer data usage. In a broader sense, the suppression of illegal behavior in the area of computer protection often includes the offenses that directly violate the rights protected by the intellectual property rights. The author started from the basic principles of the protection of the intellectual property rights in the international and European law and then discussed the connection between the infringement of the intellectual property rights and the criminal acts committed via Internet, in order to emphasize the uniqueness of the problem and the need to enable the protection of the intellectual property rights through the unique and broad legal protection. In this paper, different forms of violations of intellectual property rights provided with criminal legal protection by different law areas are analyzed, with particular reference to a wide array of problems concerning violations of intellectual property rights.

## **2. THE CONCEPT OF WILLFUL INFRINGEMENT OF IPR AND CRIMINAL SANCTIONS**

The owner of a copyright has five specific rights: reproduce, prepare derivative works, distribute, perform and display. Thus, violation of any of these rights is considered trespassing into the owners "exclusive domain". Copyright law aims to balance the competing interests of both, the artists and the general public by protecting artists works and encouraging their creativity on the one hand and on the other by allowing public access to information. An intellectual property infringement occurs when an act is done which is inconsistent with the rights of a rights holder.<sup>6</sup>

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<sup>5</sup> Correa, C. M., *Intellectual Property Rights, the WTO and Developing Countries*, London and New York, Zed Books Ltd., 2000, pp. 35-37.

<sup>6</sup> Branstetter, L. G., Fishman, R., Foley, C. F., *Do Stronger Intellectual Property Rights Increase Interna-*

Intellectual property laws are territorial in scope, in that they apply only to rights which are registered within the country. This is relevant to the question of infringement. For example, an overseas company which is a patent or trade mark owner in its home country can only complain about an infringement in a foreign country if its patent or trade mark is registered in that foreign country.<sup>7</sup>

The situation is different in the case of copyright, which as a consequence of the importation of the Berne Convention into the TRIPS Agreement<sup>8</sup>, is enforceable by a copyright owner in all countries which are signatories to the TRIPS Agreement.

Generally, TRIPS (1) establishes minimum standards of protection of such rights, (2) prescribes procedures and remedies to be available in member states to enforce rights, (3) makes the WTO dispute settlement mechanism available to address TRIPS-related disputes, and (4) extends basic WTO principles such as transparency, national treatment, and most favoured nation treatment to intellectual property rights.<sup>9</sup> Consistent with the general trade liberalization objectives of the WTO, these procedures are required to be “applied in a manner as to avoid the creation of barriers to legitimate trade and to provide for safeguards against their abuse”.<sup>10</sup>

The terms “counterfeiting” and “piracy” in relation to goods, refer to the manufacture, distribution and sale of copies of goods which have been made without the authority of the owner of the intellectual property. These goods are intended to appear to be so similar to the original as to be passed off as genuine items. This includes use of famous brands on pharmaceutical products, clothing, perfumes, and household products, not manufactured by or on behalf of the owner of the trade mark, as well as exact copies of CDs containing music or software, which are traded in a form intended to be indistinguishable to ordinary consumers from the genuine product.

In a criminal law context, intellectual property counterfeiting and piracy is defined as contraband activities which centre on the illegal production and sale of goods

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*tional Technology Transfer? Empirical Evidence from US Firm-Level Panel Data*, Quarterly Journal of Economics, No.121, 2004, pp. 321–349.

<sup>7</sup> Andersen, B, *If “Intellectual Property Right is the Answer”, What is the Question? Revisiting the Patent Controversies*, Economics of Innovation and New Technology, No.13, 2004, pp. 417–442.

<sup>8</sup> The Agreement on Trade-Related Aspects of Intellectual Property Rights - TRIPS Agreement is Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994.

<sup>9</sup> Drahos, P., *Global Property Rights in Information: The Story of TRIPS and the GATT*, Prometheus, No.11, 1995, pp. 6–19.

<sup>10</sup> *Infringements of Designs Protected by Design Law and Copyright*, Knowledge and Awareness Building Conference, OHIM, Alicante, 18-20 November 2015, p. 21.

which are intended to pass for the real product. In this context “contraband” is goods whose importation, exportation or possession is forbidden. Dealings in contraband invariably involve smuggling, where the manufacturers and distributors of these products also seek to evade taxes on the production and wholesaling of these products.<sup>11</sup>

Article 61 TRIPS provides that Members shall provide for criminal procedures and penalties “to be applied at least in cases of wilful trademark counterfeiting or copyright piracy on a commercial scale”. Among the criminal sanctions which are listed in the Article are: “imprisonment, and/ or monetary fines sufficient to provide a deterrent, consistently with the level of penalties applied for fines of a corresponding gravity”.

Also in appropriate cases, Article 61 TRIPS provides for “the seizure, forfeiture and destruction of the infringing goods and any materials and implements the predominant use of which has been in the commission of the offence”. Article 61 TRIPS also provides for criminal procedures and penalties to be applied in other cases of infringement of intellectual property rights, “in particular where they are committed willfully and on a commercial scale”. A consequence of providing for “criminal procedures” in the case of certain willful infringements is that a higher standard of proof will apply than that which is required in civil proceedings. In systems of justice derived from the British model the standard will be beyond reasonable doubt. The burden of proof will usually be carried by the prosecution. Where defenses exist, the defendant will usually carry the burden of making out the defense, usually on the balance of probabilities.

Article 61 TRIPS permits the institution of criminal penalties in the case of willful infringement. As a matter of practice it is not uncommon in intellectual property disputes for a complainant to send a cease and desist notice to an alleged infringer to put them on notice that they may be infringing the complainant’s intellectual property rights. This may, however, be unrealistic in cases of large-scale copyright piracy and trademark counterfeiting, particularly where the perpetrators may be involved in organized crime.<sup>12</sup>

A particular problem in proving the willfulness of corporate defendants is in identifying the persons whose state of mind is relevant to the culpability of the corporation. Generally speaking, a company is liable for the acts and knowledge of

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<sup>11</sup> Archibugi, D., Filippetti, A., *The globalization of intellectual property rights: Four learned lessons and four thesis*, Journal of Global Policy, No.1, 2010, pp.137-149.

<sup>12</sup> Jarrett, H. M., Chandler, C. G., Hagen, E., Sharrin, A., *Prosecuting Intellectual Property Crimes*, Fourth Edition, Office of Legal Education Executive Office for United States Attorneys, 2012, p.26.

persons who could be described as part of the directing mind and will of the company. These would include the board of directors, the managing director and other superior officers who carry out the functions of management and who speak for the company. The persons who are treated in law as the company are to be found by identifying those natural persons who by the memorandum and articles of association, or as the result of action taken by the directors, or by the company in general meeting pursuant to the articles, are entrusted with the exercise of the powers of the company.

The degree of willfulness or deliberation in the infringing conduct will have a bearing on the size of any pecuniary penalties which are imposed. Also relevant as a quantification factor will be the multiplicity of offences by a defendant and the recurrence of similar offences.<sup>13</sup>

Article 61 also refers to the deterrent effect of penalties. This will involve a consideration of 36 the capacity of the defendant to pay, the incentives for wrongdoing and the likelihood of recurrence.

### 3. LEGAL PROTECTION OF IPR IN THE EUROPEAN UNION

Several recent articles have focused on specific legislative initiatives from the European Commission in the field of intellectual property. In 2009, the European Observatory on Counterfeiting and Piracy was established by the European Commission, as part of its DG Internal Market and Services, to support the protection and enforcement of intellectual property rights and to help combat the growing threat of intellectual property infringements.<sup>14</sup>

The European Commission's aim is to prevent the infringement of intellectual property rights. The Commission is seeking stronger cooperation between authorities at all levels in the fight against intellectual property infringement. Legal instruments, such as the Directive on enforcement already exist in the EU to prevent the infringement of intellectual property rights.<sup>15</sup> In December 2015 the Commission published a consultation on the evaluation and modernization of the legal framework for the enforcement of IPR.

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<sup>13</sup> Nuth, M. S., *Crime and technology – Challenges or solutions? Taking advantage of new technologies: For and against crime*, Computer Law and Security Report, No.24, 2008, pp.437– 446.

<sup>14</sup> Cook, T., *Revision of the European Union regime on customs enforcement of intellectual property rights*, Journal of Intellectual Property Rights, No.18, 2013, pp. 485-49.

<sup>15</sup> Directive 2006/114/EC of 12 December 2006 concerning misleading and comparative advertising (codified version) [2006] OJ L 376, p. 21.

The Commission sought views from all interested parties, in particular are right holders, the judiciary and legal profession, intermediaries, public authorities, consumers and civil society, on the question if the legal enforcement frame work is still fit for purpose. Also, the Commission committed to undertake a set of target edactions which aim to foster the cross-border digital economy but also aim to ensure a safe online environment for business operators and consumers.

The Directive on the enforcement of intellectual property rights such as copyright and related rights, trademarks, designs or patents was adopted in April 2004.<sup>16</sup>The Directive requires all EU countries to apply effective and proportionate remedies and penalties against those engaged in counterfeiting and piracy, and aims to create a level playing field for right holders in the EU. It means that all EU countries should have a similar set of measures available for right holders to defend their intellectual property rights.

Successively, Regulation 386/2012<sup>17</sup> entrusted the Office for Harmonization in the Internal Market (OHIM) with tasks related to the enforcement of IPR, including the setting up of the European Observatory on Infringements of Intellectual Property Rights. According to the Regulation (recital 20), the Office should facilitate and support the activities of national authorities and Union institutions relating to the enforcement of IP rights.

In the area of patents, attention remains currently focused, and is likely to continue to be so for some time to come, on the process of implementing the European Patent with unitary effect and the Unified Patent Court.<sup>18</sup>

In March 2013, Europol<sup>19</sup> Focal Point ‘COPY’s’ mandate to investigate counterfeit products was expanded to include substandard and dangerous goods.<sup>20</sup>Europol’s Serious Organized Crime Threat Assessment (SOCTA) 2013 identified counterfeit goods violating, health, safety and food regulations and substandard goods as a recommended priority crime area as part of the EU Policy Cycle 2014-2017.

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<sup>16</sup> Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights [2004], OJ L 157..

<sup>17</sup> Regulation (EU) No 386/2012 of the European Parliament and of the Council on entrusting the Office for Harmonization in the Internal Market (Trade Marks and Designs) with tasks related to the enforcement of intellectual property rights, including the assembling of public and private-sector representatives as a European Observatory on Infringements of Intellectual Property Rights [2012] OJ L 129/1.

<sup>18</sup> Cook, T., *The progress to date with the Unitary European Patent and the Unified Patent Court for Europe*, Journal of Intellectual Property Rights, No. 18, 2013, pp. 584-588.

<sup>19</sup> Council Decision 2009/371/JHA establishing the European Police Office (Europol) [2009] OJ L 121/37

<sup>20</sup> Focal Points are teams formed by specialists and analysts supporting Member States operations related to specific areas of crime that are included in the above Council Decision.

Key findings of the European study “Intellectual Property Rights Intensive Industries: contribution to economic performance and employment in Europe”<sup>21</sup> reveal that approximately 89 % of the EU’s total external trade and 39 % of total economic activity in the EU (EUR 4.7 trillion annually) is generated by IPR-intensive industries. Regarding the breadth of the problem, poor quality counterfeit clothing and accessories of luxury brands were, until recently, the most commonly observed products. However, the involvement of sophisticated networks of criminals seeking to make enormous profits has led to mass production of high quality imitations. Criminal groups are no longer purely confined to the duplication of apparel and accessories. Counterfeited goods now include all sectors, such as pharmaceuticals, electronic goods, household products, cosmetics, automotive spare parts, pesticides, food and beverages, etc. The European Commission (DG TAXUD) reports that in 2013, 25.2 % of the products detained were for daily use and would be potentially dangerous to the health and safety of consumers.

Research carried out for Situation Report on Counterfeiting in the European Union shows that the source country for over two thirds of counterfeit goods circulating in the EU is China, and that most goods – both legal and counterfeit – are produced there.<sup>22</sup>

Evidence suggests<sup>23</sup> that organized crime groups frequently use Free Trade Zones (FTZs) to tranship, label and obscure the port of origin of illegal goods. There are approximately 3 000 FTZs in 135 countries. They are “designated areas within jurisdictions in which incentives are offered to support the development of exports, foreign direct investment (FDI), and local employment. These incentives include exemptions from duty and taxes, simplified administrative procedures, and the duty free importation of raw materials, machinery, parts and equipment”.<sup>24</sup>

Several reports analyzing FTZs highlight the lack of IT system coordination between customs administration and the FTZs administration, allowing criminals to easily re-document shipments by concealing the origin, contents and destinations of shipments.<sup>25</sup> According to some opinions, the development and expansion of

<sup>21</sup> Intellectual Property Rights Intensive Industries: contribution to economic performance and employment in the European Union, Industry-Level Analysis Report, September 2013.

<sup>22</sup> 2015 Situation Report on Counterfeiting in the European Union, Joint project between Europol and the Office for Harmonization in the Internal Market, April 2015, p.14.

<sup>23</sup> See Jankovic, D., *Differentiation Between The Police Activities And Evidence Collection In Criminal Proceedings*, In: Thematic Conference Proceedings of International Significance, Academy of Criminalistic And Police Studies, International Scientific Conference “Archibald Reiss Days, Belgrade, 2015, pp. 247-259.

<sup>24</sup> FATF Report, Money Laundering Vulnerabilities of Free Trade Zones, March 2010.

<sup>25</sup> BASCAP, The role and responsibilities of FTZs, 2011.



new FTZs, in particular the Port of Tanger Med (15 km from the EU) could provide additional opportunities for OCGs to produce, manufacture, label, tranship and export counterfeit goods into the EU. Although the majority of counterfeit products in circulation in the EU are manufactured outside the EU, research has highlighted domestic EU production originating from Belgium, the Czech Republic, Spain, Italy, Poland, Portugal, and the UK.

As counterfeiters look for new ways to expand their illegal businesses, the security of business supply chains becomes increasingly important.

#### **4. PREVIEW OF THE CASE LAW OF THE REPUBLIC OF SERBIA IN RELATION TO THE OFFENSES AGAINST INTELLECTUAL PROPERTY**

Taking into account criminal offenses against intellectual property rights defined in the Criminal Code of the Republic of Serbia, it can be noted that the most frequent crime in the jurisprudence of the courts of general jurisdiction is the crime of Unauthorized Use of Copyrighted Work or other Work Protected by Similar Right, Article 199 of the Criminal Code of the Republic of Serbia. The object of the legal protection is the work of authorship or a related right.

Data obtained by examining the court records of the Basic Court in Nis<sup>26</sup>, for the period of time 2004 to 2014, show that the largest number of prosecutions for the specified criminal act were initiated in 2005, a total of 85 procedures. An interesting fact is that in 2005 the greatest number of proceedings ended with convictions, 64 of them. Even though a suspended sentence was imposed in most of the cases, in a certain number of cases the Court imposed a fine and imprisonment.

This tendency continued during the year 2006 and later, so it can be noticed that the activity of the court was almost proportional to the number of prosecuted cases. Therefore, the court, dealing according to the applied charging documents, completed almost all the procedures and cases with final judgments, whereby prison sentences, fines and suspended sentences were imposed in a stable percentage.

The important feature of the crime of the unauthorized use of the work of authorship or the objects of related rights, according to the Criminal Code of the Republic of Serbia, Article 199, is that the unauthorized use, in various ways, of a work of authorship or an object of related right simplifies the execution of the crime. Whereas, the author owns the copyright and has the exclusive right to authorize

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<sup>26</sup> Court registers of criminal cases of the Basic Court in Nis, Serbia, for the years 2004 to 2014.

or prohibit the marketing of copies of his/her work, or his/her publication, performance, presentation, transmission, broadcasting, recording and reproduction.

The first and basic form of this offense exists (Article 199, paragraph 1 Criminal Code of the Republic of Serbia), if the perpetrator publishes, records, multiplies or otherwise publicly discloses, in whole or in a part, a work of authorship or an object of related rights without authorization. This includes a work of authorship, interpretation, phonogram, videogram, broadcasts, computer program or database. Therefore, the basic incrimination act is an unauthorized reproduction of the work of authorship.

The second basic form (Article 199, paragraph 2, Criminal Code of the Republic of Serbia) of this offense performs the offender who puts on the market or with the intention of putting into circulation without authorization keeps amplified or already put into circulation unauthorized copies of works of authorship, interpretations, phonograms, videograms, broadcasts, computer program or database. In this case, the basic incrimination act is an unauthorized circulation of the works of authorship.

This offense appears, in most of the charges, in the second form, which, at the same time, represents its most common form. From the point of view of the imposed court judgments and the indictments, this offense is mostly preformed in the form of an unauthorized circulation of copies of works of authorship. The object of the offense are the works of authorship, usually movies recorded on CDs which are illegally sold and exposed for sale, often at the car markets, markets and public places with a large frequency of passers-by and customers.

In some cases, the courts dealt with the unauthorized reproduction of the works of authorship without copyright on the specific works of authorship from the distributing companies. For example, the unauthorized reproduction was performed at home or at some other place and the copies were put on the market in video and DVD clubs where they were listed in special catalogues and sold at prices in a separate price list.

There is an interesting case, K.br.201/05, completed with the final judgment before the Basic Court in Nis, in which the owner of a print store at the Faculty of Philosophy in Nis was convicted for unauthorized photocopying of textbooks, written by the professors at the specific faculty, without the permission of copyright owners. The Court in this case held that photocopying of textbooks, in order to sell them and make them available to a greater number of people, represents the reproduction of copies of the works of authorship, and the fact that the defendant owned registered print shop does not relieve the guilt. Particularly, the fact that the defendant

owned registered print shop cannot be equated with the right to produce and sell the copies of textbooks, which are the works of authorship, without the authorization of the copyright holders, especially when the fact that the authors were available to the defendant and that he could provide their consent is taken into account.

The other forms of this offense as well as the other offenses against the intellectual property are not going to be discussed here since their frequency in the jurisprudence is inconsiderable. Article 199, paragraph 1 and paragraph 2 Criminal Code of the Republic of Serbia defining the two forms of the offense of unauthorized use of the works of authorship or the objects of related rights stipulates that the punishment for its violation is a sentence of up to three years of imprisonment. But, if this offense was committed with the intention in acquiring illegal material benefit for himself or another person, then according to the article 199, paragraph 3. Criminal Code of the Republic of Serbia, the offender can be sentenced to imprisonment in the range of six months to five years. In all these cases, the law stipulates the mandatory imposition of security measures such as dispossession and destruction of the unauthorized copies of the works of authorship.

This has been mentioned, because the criminal policy of the courts in the Republic of Serbian determining the type and level of criminal penalties for alleged criminal offenses takes into account particular circumstances of each case, particularly the personality of the offender and the level of the infringement of the protected good, whether the offender previously committed the same offenses as well as the quantity and the extent of the infringement of the protected object.

Thus, if the offender led decent life i.e. if he was not convicted, if he was a good worker, a good father of the family, if he was honest and appreciated in the community where he lived, then these circumstances indicated the person who was not morally deviant and socially maladjusted and that the application of more lenient penalty could achieve the purpose of punishment. However, in case of recidivist, especially if it is a special recidivism i.e. the perpetrator who had previously been sentenced to a more lenient punishment for the same or similar criminal offense, it was estimated that such criminal sanctions had not achieved their purpose, therefore severe penalties, such as fine or even a prison sentence, were imposed.

The above mentioned as well as the large number of suspended sentences imply that most of the offenders had not been previously convicted, most of them were members of young population aged up to 25 years, students or unemployed persons with secondary education, family people, people who were not prone to criminal behaviour nor recidivists after imposed suspended sentences. In a few cases a greater criminal risk was detected, which was rated by taking into account

the personality of the offender and the way of the offense execution, the previous life of the offender, persistence in the offence execution as well as the seriousness of the consequences as the result of the committed offense, so the court found it necessary to impose prison sentences, which was done in a certain number of cases.

Subject of special consideration are criminal acts of organized crime, which are pending before the Special Division of the High Court in Belgrade. The verdict of the High Court in Belgrade, Special Department K.Po1 108/10 reached on 12.07.2010.drew great attention. It was mostly upheld by the Appellate Court in Belgrade Kž1 PO1 22/10 on 11.02.2011.when the final verdict was reached. Criminal proceedings were conducted against six defendants charged with the criminal offense of criminal association (Forming a Group for the Purpose of Committing Criminal Offences Article 346 of the Criminal Code of the Republic of Serbia) and with a crime of forging value tokens according to Article 226, paragraph 2 referring paragraph 1, Forging Value Tokens Article 226 of the Criminal Code of the Republic of Serbia<sup>27</sup>. All of them are sentenced to a compound imprisonment sentence, the first accused as the initiator of the criminal association is sentenced to the imprisonment in duration of four years, the second accused to the imprisonment in duration of three years, and the other accused are also sentenced to the imprisonment in a shorter length than the first two accused. Although, according to the Criminal Code of the Republic of Serbia a criminal offense of forging value tokens belongs to the category of crimes against the economy, this case has been stated bearing in mind that it is similar to the cases considering the protection of intellectual property rights, production of counterfeit products or their unauthorized multiplication.

In this particular case, the court found that the first accused organized a criminal group for the purpose of acquiring financial profits. The first accused as the initiator of the criminal group engaged printers the second accused and the third accused to print counterfeited value tokens<sup>28</sup> - a variety of revenue and excise stamps (among other Slovak revenue stamps with a nominal value of 1,000 crowns). The fourth accused was engaged for the pre-press ordering and for the distribution of the counterfeited value tokens in order to be used by another person. They also printed the counterfeited value tokens in their own pressrooms and then distributed them to Hungary and other countries. The aim of this group was to acquire financial benefit since the distribution of the counterfeited value tokens provided

<sup>27</sup> Criminal Code, Official Gazette of the Republic of Serbia” No. 85/2005, 88/2005, 107/2005, 72/2009, 111/2009, 121/2012 and 104/2013.

<sup>28</sup> Value tokens are made on the basis of the law and their issuing means that a certain amount of money has been paid, in fact they replace the payment of that amount in Stojanović Z. *Comment on the Criminal Code*, Official Gazette, Belgrade, 2009, 550.

the financial profit, which the first accused, as the initiator of the group, was taking for himself and a part of it shared to the other members of the group according to predetermined roles.

The first accused, as the initiator of the group, as well as the other members of the criminal group were aware that both revenue stamps and excise stamps represent the value tokens and that can be printed in the authorized printing rooms only, on the ground of the specific laws and regulations of the domicile country. The Court found that the first accused, as the initiator of the crime group, and the other accused, as the members of a criminal group, were involved in the production of counterfeited value tokens i.e. revenue and excise stamps in order to be used by another person by putting them legally on the market in those countries in which the original value tokens serve as the proof of payment.

The court also found that all the accused acted with direct intent of performing the action of forging value tokens according to Article 226, paragraph 2 of the Criminal Code, as they consciously created false revenue and excise stamps that in their domicile countries serve as a proof of payment and that they were fully aware that these value tokens can be made only on the basis of the approval of the competent state authorities and special powers based on law. In addition, the intention of the accused was to transfer the counterfeited value tokens to another person as the original ones in order to achieve financial benefit.

## 5. PIRACY IN THE INTERNET AGE

The Internet has created boundary-less territories and has helped in evolving a unique method to share and transfer information, growth of e-commerce and in creating a global platform for all nations and its citizens. Online piracy is a major flipside to this development.<sup>29</sup>

Infringement of copyright on the Internet has become a common phenomenon. Infringement either can take place wilfully or through ignorance. There is a close nexus between intellectual property (IP) and the Internet and their convergence in the digital era is inevitable.<sup>30</sup> The IP - Internet nexus can be looked at from three perspectives – the author, the user and the service provider.<sup>31</sup> An author creates a

<sup>29</sup> Brenner, S. W., *Toward a Criminal Law for Cyberspace: A New Model of Law Enforcement?* Rutgers Computer and Technology Law Journal, No. 30, 2004, pp. 1-104.

<sup>30</sup> Richet, J.L., *From Young Hackers to Crackers*, International Journal of Technology and Human Interaction, No. 9, 2013, pp.53-62.

<sup>31</sup> Dörr, D., Janich, S., *The Criminal Responsibility of Internet Service Providers in Germany*, *Mississippi Law Journal*, 80 Miss. L.J. 1247, 2011, 1247-1261.

piece of work and registers it under the existing IP laws to enjoy certain benefits, but the digital world hinders the complete enjoyment of these rights. Copyright owners perceive Internet as threat to their exclusive rights due to the following reasons:(1) wide distribution is relatively simpler and quicker on the Internet; (2) anyone can distribute it to a mass audience; (3) the quality of copies is virtually indistinguishable from the original; (4) distribution is almost costless; and 4) users can easily and cheaply obtain copyright material on the Internet.<sup>32</sup>

Over the past years, the idea of how to reconcile intellectual property rights and the Internet technologies and platforms has become a pivotal point of all Internet governance discussions.<sup>33</sup>With the emergence of the Internet as a means of communication, creativity, innovation and ideas and with the increasing accessibility to information, traditional concepts of intellectual property appear increasingly antiquated and inapplicable in a space where information is democratized, people become increasingly more empowered to create exchange and distribute content and innovation and creativity proliferate.<sup>34</sup>Internet has spawned new forms of crimes and made old crimes easier to commit, cyber-stalking, identity theft, child pornography, fraud and scams, copyright violations, hacking and creating malicious code, the list goes on and on.<sup>35</sup>

The Berne Convention for the Protection of Literary and Artistic Works<sup>36</sup> establishes minimum rights that all countries agree to.<sup>37</sup>The United States of America has extended its copyright law and enacted the Digital Millennium Copyright Act (DMCA)<sup>38</sup> which came into force in 1998. The Act contains six exceptions to infringement including educational research, encryption research, protection of minors, reverse engineering, privacy of individuals and security testing. The

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<sup>32</sup> Hemmige, N., *Piracy in the Internet Age*, Journal of Intellectual Property Rights, No. 18, 2013, pp 457-464.

<sup>33</sup> Brenner, S. W., Koops, B.-J., *Approaches to cyber crime jurisdiction*, Journal of High Technology Crime, No. 15, 2004, pp. 1-46.

<sup>34</sup> Hunton, P., *The stages of cybercrime investigations: Bridging the gap between technology examination and law enforcement investigation*, Computer Law & Security Review, 27, 2011, pp. 61-67.

<sup>35</sup> Holt, T. J., *Exploring the Intersections of Technology, Crime and Terror*, Terrorism and Political Violence, 24(2), 2012, pp. 337-354.

<sup>36</sup> Berne Convention for the Protection of Literary and Artistic Works of September 9, 1886, completed at Paris on May 4, 1896, revised at Berlin on November 13, 1908, completed at Berne on March 20, 1914, revised at Rome on June 2, 1928, at Brussels on June 26, 1948, at Stockholm on July 14, 1967, and at Paris on July 24, 1971, and amended on September 28, 1979.

<sup>37</sup> Kahandawaarachchi, T., *Liability of Internet Service Providers for Third Party Online Copyright Infringement: A Study of the US and Indian Laws*, Journal of Intellectual Property Rights No. 12, 2007, pp. 553-561.

<sup>38</sup> The Digital Millennium Copyright Act (DMCA) of 1998, US Copyright Office Summary December 1998, Pub. L. No. 105-304, 112 Stat. 2860, 1998.

DCMA added Section 512 specifically to the Copyright Act which brought forth the limitation of liability on the service providers in case of online copyright infringement and assigned rules in case of non-profit educational institutions.

Louis Vuitton successfully sued Akanoc Solutions Inc., Managed Solutions Inc. and Steven Chen<sup>39</sup> for “their role in hosting websites that directly infringed Louis Vuitton’s trademarks and copyrights”. Although the websites did not directly sell the counterfeit merchandise, they listed an email address allowing customers to initiate a transaction. Louis Vuitton was able to prove wilful intent, as they had sent the defendants 18 notices of trademark and copyright infringement. The jury awarded Louis Vuitton USD 10.5 million in statutory damages for wilful trademark infringement of the 13 trademarks against each defendant, for a total of USD 31.5 million, plus USD300 000 for statutory damages for wilful copyright infringement and infringement of 2 copyrights against each defendant, totalling USD 900 000.<sup>40</sup>

In United Kingdom came into force in June 2012 the Digital Economy Act of 2011<sup>41</sup> and covered subjects that deal with digital encroachment of intellectual property, namely, copyright infringement, television services, radio services, regulation of the same, etc. The Act with respect to copyright involves two major parties – the ISPs and copyright holders.

Despite various laws protecting IPR, it is still an enormous task to keep a check on the copyright infringers on the Internet.

### 5.1. The “Tomato Garden” Software Internet Piracy Case

The “Tomato Garden” is an internet piracy case in China. The “tomato garden” version software was made by the defendants Zhang Tianping, Hong Lei and Liang Chaoyong under the instruction of Sun Xianzhong.<sup>42</sup>

The following facts were confirmed by the Huqiu Court in the hearing. Between December 2006 and August 2008, Wanglian Ad Co and Gongruan Co, for the purpose of making profits, without Microsoft’s permission, reproduced Windows

<sup>39</sup> Case Nos. 10–15909, 10–16015 Louis Vuitton Malletier, S.A. v. Akanoc Solutions, Inc., Managed Solutions Group, Inc., Steven Chen [2011] United States Court of Appeals, Ninth Circuit, Decided: September 09, 2011.

<sup>40</sup> More details of this case can be found through the publication United States Court of Appeals for the 9th Circuit case number: 10- 15909 D.C. No. 5:07-cv-03952-JW and No. 10-16015 D.C. No. 5:07-cv-03952-JW Opinion, 9 September 2011.

<sup>41</sup> Digital Economy Act of 2010, UK National Archive.

<sup>42</sup> Ma, Zhong-fa., Gao, Wei-na., *Impact of the ‘Tomato Garden’ Software Internet Piracy Case on Combating Copyright Infringement in China*, Journal of Intellectual Property Rights Vol 17, January 2012, pp 27-36.

XP software and made several 'tomato garden' version software on the basis of XP software with minor modifications. By ways of modifying the browser's home page, providing default search page, bundling software of other companies and so on, the defendants allowed netizens to freely download the 'tomato garden' version software with commercial plugins of many companies, including Baidu Times Network Technology (Beijing) Co Ltd (Baidu) and other information technology corporations, from the 'tomato garden' website and 'Redu' website.

The court held that the action of reproducing computer software by slightly modifying relevant procedures without permission of the copyright owners, distributing it online for other people to download with other software or plug-ins bundled together, thus receiving profits including advertisement fee, shall be regarded as 'reproducing and distributing' 'for the purpose of making profits' provided by Article 217 of Criminal Law.

After the thorough trial, the judgment was that all the defendants involved - one legal entity (Gongruan Co) and four natural persons - were to be punished to certain degree. Gongruan Co was fined RMB 8,772,861.27 Yuan, Sun Xianzhong was sentenced to fixed-term imprisonment of 3 years and 6 months with a fine of RMB 1,000,000 Yuan, Zhang Tianping was sentenced to fixed-term imprisonment of 2 years with a fine of RMB 100,000 Yuan, Hong Lei was sentenced to fixed-term imprisonment of 3 years and 6 months with a fine of RMB 1,000,000 Yuan and Liang Chaoyong was sentenced to fixed-term imprisonment of 2 years with a fine of RMB 100,000 Yuan.<sup>43</sup>

The Tomato Garden case was the most serious copyright infringement concerning Windows software in networks where the Business Software Alliance on behalf of Microsoft Corporation complained to the National Copyright Administration and the Ministry of Public Security and requested them to protect Microsoft's rights and interests by the way of seeking criminal liability of the infringers in China, to which had been attached so much importance in the industry of information technology.

According to an investigation made by a nongovernmental organization, 'tomato garden' version software was very popular and downloaded by 19 per cent netizens (about 10 million), and the amounts of illegal gains and number of downloaded illegal copies confirmed by Huqiu Court were huge.<sup>44</sup> Therefore, it may be reason-

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<sup>43</sup> Ma *et al.*, *op. cit.* note 44, p. 28.

<sup>44</sup> Kecheng, L., *The principal criminals were sentenced to the prison for three and a half years*, The Oriental Morning Newspaper, 20 August 2009.



able to regard this case as the gravest networking copyright infringement and one of the most severe copyright infringements till date in China.<sup>45</sup>

Also significant is the fact that Microsoft proved that it had not authorized any person or company to make software modified or reproduced copies. The court ascertained that the ‘tomato garden’ version Windows software was a reproduction based on the core procedures of Microsoft Windows software made without authorization.

## 5.2. IPR and Digital Currency

The nature of digital currencies is difficult to apprehend, the underlying technology is complicated, their operations are conducted in a decentralised way, and they are almost unregulated. No-one can predict if a particular digital currency may become a direct competitor for existing currencies in the distant future, or if it might just collapse overnight.<sup>46</sup>

However, some danger might arise for intellectual property and payment systems, including reputational damage for systems which are not directly exposed to virtual currencies. The most problematic field is consumer protection, as there are no safety nets, such as deposit guarantee funds, available to alleviate losses.

The criminals use technological advancements to distance themselves from their illegal activities and profits through use of virtual banking and electronic money transfer systems, which allow criminals to buy, sell, and exchange counterfeit goods without any physical interaction.<sup>47</sup> New digital, virtual currencies, such as Bitcoin<sup>48</sup>, add yet another layer of anonymity by allowing users to transfer value

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<sup>45</sup> Yi, Z., *The Judgment of first trial for ‘Tomato Garden’ case has developed huge alarms to copyright infringers, but the burden of protecting intellectual properties is still heavy and the road is long*, Wenhui Daily, 21 August 2009.

<sup>46</sup> Tu, K. V., Meredith M. W., *Rethinking Virtual Currency Regulation In The Bitcoin Age*, Washington Law Review, No. 90, 2015, pp.270-347.

<sup>47</sup> Bennett, D, *The Challenges Facing Computer Forensics Investigators in Obtaining Information from Mobile Devices for Use in Criminal Investigations*, Information Security Journal: A Global Perspective, No 3, 2012, pp.159-168.

<sup>48</sup> Bitcoin was introduced on 31 October 2008 to a cryptography mailing list, and released as open-source software in 2009. Bitcoin or cryptocurrency is a form of digital currency, created and held electronically. No one controls it. Bitcoins are not printed. Bitcoin is invented by an unidentified programmer, or group of programmers, under the name of Satoshi Nakamoto. Despite many efforts, the identity of Satoshi remains unknown to the public and it is not known whether Satoshi is a group or a person. Satoshi in Japanese means “wise” and someone has suggested that the name might be a portmanteau of four technology companies: SAmsung, TOSHiba, NAKAmichi, and MOTORola. Others have noted that it could be a team from the National Security Agency (NSA) or an e-commerce firm.

without the collection of any personally identifiable information.<sup>49</sup> Regulations often fail to affect such virtual currencies due to lack of foresight by the regulation writers, creating a legal grey area. Thus, criminals can continue to capitalize on technological innovation to bolster their illegal activities.<sup>50</sup>

The system is peer-to-peer and transactions take place between users directly, without an intermediary.<sup>51</sup> Bitcoin is different from normal currencies. It can be used to buy things electronically. In that sense, it is like conventional dollars, euros, or yen, which are also traded digitally. Bitcoin's image is polarized. Some view it as a tool used by criminals to commit crimes, whereas others view it as a tool for a legal system of currency that is free from unlawful government interference.<sup>52</sup>

Its proponents argue that Bitcoin has many properties that could make it an ideal currency for mainstream consumers and merchants. For example, bitcoins are highly liquid, have low transaction costs, can be used to send payments quickly across the internet, and can be used to make micropayments. This new currency allows organizations to receive donations and conduct business anonymously.<sup>53</sup> On the other hand, bitcoin's decentralization and peer-to-peer infrastructure allows it to be virtually immune to the risks of server raids or the loss of a central database to hackers.

However, bitcoins are like money, and money can be used for both lawful and unlawful purposes. Due to the possibility of its use for nefarious activities such as money laundering, Bitcoin's pseudonymous network negatively impacted the image of emerging virtual currency systems, and some authorities view Bitcoin solely as a platform for criminals.<sup>54</sup>

One of the most well-known criminal uses of Bitcoin was on the Silk Road website<sup>55</sup>, a black-market often used to trade illicit drugs and counterfeit goods.

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<sup>49</sup> Krohn-Grimberghe, A., Sorge, C., *Bitcoin: Anonym Einkaufen im Internet?* University of Paderborn, Department 3 – Wirtschaftsinformatik Analytische Informationssysteme und BI, Germany, 2012, p. 3.

<sup>50</sup> Bryans, D., *Bitcoin and Money Laundering: Mining for an Effective Solution*, Indiana Law Journal, No.89, 2014, pp. 441-472.

<sup>51</sup> Nakamoto, Satoshi, *Bitcoin: A Peer-to-Peer Electronic Cash System*, URL=<https://bitcoin.org/bitcoin.pdf>. Accessed 1 January 2017.

<sup>52</sup> Ron, G. D., Shamir, A., *Quantitative Analysis of the Full Bitcoin Transaction, Quantitative Analysis of the Full Bitcoin Transaction Graph*, Department of Computer Science and Applied Mathematics, The Weizmann Institute of Science, Israel, 2012, pp.1-19.

<sup>53</sup> Grinberg, Reuben, *Bitcoin: An Innovative Alternative Digital Currency*, Yale Law School, Hastings Science & Technology Law Journal, Vol. 4, 2011, pp.160-208.

<sup>54</sup> Kaplanov, N. M., *Nerdy Money: Bitcoin, the Private Digital Currency, and the Case Against its Regulation*, Loyola Consumer Law Review 111, No. 25, 2012, pp.111-174.

<sup>55</sup> Silk Road is anonymous online "black market" goods. See: James, M., *Lost On The Silk Road: Online*

One of the most common initial questions about Bitcoin is whether the online currency is legal, given the government's monopoly on issuing legal tender.<sup>56</sup> Current law and regulation does not envision a technology like Bitcoin, so it exists in something of a legal grey area. This is largely the case because Bitcoin does not exactly fit existing statutory definitions of currency or other financial instruments or institutions, making it difficult to know which laws apply and how.

The legal status of digital currency varies substantially from country to country and is still undefined or changing in many of them.<sup>57</sup>

In October 2015, the European Court of Justice ruled that bitcoin transactions are exempt from consumption tax similarly as traditional cash. Europe's highest court ruled in response to a request by Swedish tax authorities digital (Case *Skatteverket v David Hedqvist*)<sup>58</sup>, who had argued bitcoin transactions should not be covered by a European Union directive exempting currency transactions from value added tax (VAT). The court ruled that bitcoins should be treated as a means of payment, and as such were protected under the directive. "Those transactions are exempt from VAT under the provision concerning transactions relating to 'currency, bank notes and coins used as legal tender", the ECJ concluded.<sup>59</sup>

Bitcoin crimes are likely to emerge as an important significant phenomenon thereby forcing the relevant stakeholders to look at appropriate legal frameworks which can effectively regulate certain activities.

### **5.3. Cyber Piracy - criminal offences, competent authorities and organization and cooperation in the Republic of Serbia**

The Republic of Serbia signed both the Convention and the Protocol in Helsinki on 7 April 2005, at the time of the State Union of Serbia and Montenegro, and the

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*Drug Distribution And The 'Cryptomarket'*, Criminology and Criminal Justice: An International Journal, 2014, pp. 351-367.

<sup>56</sup> He, D., Habermeier, K., Leckow, R., Haksar, V., Almeida, Y., Kashima, M., Kyriakos-Saad, N., Oura, H., SaadiSedik, T., Stetsenko, N., Verdugo-Yepes, C., *Virtual Currencies and Beyond: Initial Considerations*, IMF Staff Team, International Monetary Fund, Monetary and Capital Markets, Legal, and Strategy and Policy Review Departments, 2016, p.16.

<sup>57</sup> Financial Action Task Force-FATE, *Guidance for a Risk-Based Approach to Virtual Currencies*, FATE, Paris, 2015, p.12.

<sup>58</sup> Case C -264/14 *Skatteverket v David Hedqvist*, [2015] Court of Justice of the European Union.

<sup>59</sup> *Bitcoin currency exchange not liable for VAT taxes: top EU court*, Reuters, 22 October 2015, URL= <http://www.reuters.com/article/us-bitcoin-tax-eu-idUSKCN0SG0X920151022>. Accessed 6 January 2017.

National Parliament of the Republic of Serbia ratified both documents in 2009<sup>60</sup>. The compulsory application of the Convention commenced in August 2009.

The mentioned documents served as a legal basis for domestic laws and standards, as well as for establishing specialized state bodies to combat cybercrime in general.<sup>61</sup> Those laws provide civil law protection of intellectual property rights, and are in accordance with the standards and requests of the European Union and the World Trade Organization. Until recently, two aspects of the legal protection of the intellectual property – penal and administrative protection – have not been meeting requirements of the European law and TRIPS Agreement in their entirety. The most important regulations adopted and adjusted to the provisions of the Convention include: the Criminal Code<sup>62</sup>, the Law on the Liability of Legal Entities for Criminal Offences<sup>63</sup>, Criminal Procedure Code<sup>64</sup>, the Law on Special Measures for the Prevention of Crimes against Sexual Freedom Involving Minors<sup>65</sup>, the Law on Seizure and Confiscation of the Proceeds from Crime<sup>66</sup>, and the Law on Special Authorizations for Efficient Protection of Intellectual Property<sup>67</sup>.

Serbia has set up specialised units (high-tech crime prosecutor, police cyber unit, specialised customs unit, tax unit and tax police) aimed at enforcing the legislation in this area. The length of investigations has been shortened. It fully updated an electronic database of customs offences in the field of intellectual property rights and introduced electronic handling of requests for protection of intellectual property rights.

Along with the development of information technologies, the issue of legal regulations that can prevent and sanction cybercrime has gained significance.<sup>68</sup> The

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<sup>60</sup> Act of Formal Confirmation of the Convention on Cybercrime, Official Gazette of the Republic of Serbia, No. 19/2009

<sup>61</sup> Spasić, V., *Savremeni oblici piraterije u autorskom i srodnom pravu*, *Pravni život* 56 (513), 207, pp 293-309.

<sup>62</sup> Criminal Code, Official Gazette of the Republic of Serbia No.85/2005, 88/2005, 107/2005, 72/2009, 111/2009, 121/2012, 104/201, 108/2014, 94/2016.

<sup>63</sup> Law on the Liability of Legal Entities for Criminal Offences, Official Gazette of the Republic of Serbia no.97/2008.

<sup>64</sup> Criminal Procedure Code, Official Gazette of the Republic of Serbia No. 72/2011, 101/2011, 121/2012, 32/2013, 45/2013 and 55/2014.

<sup>65</sup> Law on Special Measures for the Prevention of Crimes against Sexual Freedom Involving Minors, Official Gazette of the Republic of Serbia No. 32/2013.

<sup>66</sup> Law on Seizure and Confiscation of the Proceeds from Crime, Official Gazette of the Republic of Serbia<sup>9</sup> No. 32/2013

<sup>67</sup> Law on Special Authorizations for Efficient Protection of Intellectual Property, Official Gazette of the Republic of Serbia<sup>9</sup> No. 46/2006 and 104/2009 .

<sup>68</sup> Vida M. Vilić, *Criminal Law Protection of Personality: Implementation of Council of Europe's Convention*

Criminal Code of the Republic of Serbia regulated criminal offences regarding violation of computer data security, thus clearly contributing to a more efficient fight against cybercrime. Still, this regulatory framework did not fully embrace the deviant forms of behaviour manifested as misuse of computer technologies and computer systems (e.g. Internet harassment, unauthorized alteration of the contents published on the Internet, etc.).

Cybercrime Unit has been established within the Ministry of Interior of the Republic of Serbia: Cybercrime Unit for combating cybercrime. The Unit acts upon requests of the Special Prosecutor's Office, in accordance with the law. Within the Cybercrime Unit were established also Department for Electronic Crime and Department for Combating Crime in the area Intellectual Property as organizational parts for performing duties in regard to more specific areas of cybercrime combating.

The Higher Prosecutor's Office in Belgrade has the jurisdiction for the territory of the Republic of Serbia to proceed in cybercrime matters. The Higher Prosecutor's office established special cybercrime department - Special Prosecutor's Office. The Higher Court in Belgrade shall establish a Cybercrime Department which has first-instance jurisdiction in cybercrime matters for the territory of the Republic of Serbia.

Besides criminal offences that are listed in Criminal Code of the Republic of Serbia, Law on the organization and competences of government authorities combating cybercrime<sup>69</sup> also regulates this legal matter and, additionally, widens the scope of criminal offences which are deemed to be cybercrime, and those are criminal offences against intellectual property, property, economy and legal instruments, where computers, computer systems, data and products thereof appear as the objects or the means of committing a criminal offence and if the number of items of copyrighted works is over 2000, or the amount of the actual damage is over 1.000.000,00 RSD, as well as criminal offences against freedoms and rights of man and citizen, sexual freedoms, public order and constitutional system and security, which can be considered, due to the manner in which they are committed or tools used, as cybercrime offences.

In Serbia the most common forms of cybercriminal are related to Internet auction sites (e-shop), abuse of credit cards, phishing and identity thefts, "Nigerian" or

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*on Cybercrime No. 185 Of 2001 Into Serbian Legislative*, International Scientific Conference on Ict and E-Business Related Research, Doi: 10.15308, Sinteza, 2016, pp. 66-73

<sup>69</sup> Law on the organization and competences of government authorities combating cybercrime, "Official Gazette of the Republic of Serbia No 61/2005 and 104/2009".

“419” scam, and the most common infringements by Internet frauds are copyrights. In the Republic of Serbia, more than half perpetrators of cybercrimes are young persons under 35 years old. The great part of perpetrators, 35.48% has technical and technological knowledge while 24.52% of them have no occupation. 58% of perpetrators are unemployed.<sup>70</sup>In Serbia cybercriminals are increasingly focusing on Adobe PDF and Flash files, to infect victims with malware. In addition, they use rich content applications such as Flash files to distribute malicious code. Flash-based ads on the Web, because their binary file format, enable the cybercriminals to hide their malicious code and later exploit end-user browsers to install malware. Hackers have been breaking into Facebook and MySpace and implanting malware to distribute to a victim’s social network. Serbian IT professionals are already aware of this risk.

Also, Serbia has a long way to go in bringing a comprehensive legislation on the liability of ISPs in cases of copyright infringement in digital context. It is of utmost importance for a country such as Serbia with an increasing number of Internet users and thereby increasing the threat to infringing the rights of copyright holders. At the same time, Serbia is becoming digitalized and if new laws are not brought in to protect ISPs from copyright infringement by subscribers and the related aspects, it would adversely affect the ISP industry as a whole though cases regarding the same are yet to come before any court of law in Serbia. Moreover, it is also important for Serbia to update their laws regarding this aspect to be in competition with other European countries.<sup>71</sup>

## 5. CONCLUSION

The paper finds that: (1) intellectual property protection is essential to encouraging creative expression and the development of new products in a number of industries, (2) the development of intellectual property-based products is generally far more expensive than their manufacture or duplication, (3) inadequate IPR protection leaves firms and consumers vulnerable to infringement, causing them to risk their investment and reputations.

Technology is now deeply enmeshed within the fabric of society. Criminals understand that technology is a highly effective force multiplier which can be abused to enable illicit activity, and leveraged to facilitate access to a global constituency of victims living online. Our collective dependency on technology makes this threat

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<sup>70</sup> Domazet, S., *Piraterija – “vampir” savremene privrede*, Pravo: teorija i praksa Vol. 24, No. 3/4, 2007, pp. 39-40.

<sup>71</sup> Milovanovic, G., Barac, N., Andjelkovic, A., *Cybercrime - A Treat for Serbian Economy*, Securitatea Informatională, Conferința Internațională, ediția a VII-a, 15-16, 2010, pp 111-114.

extremely difficult to eliminate. The relative ease with which offenders engage in new scopes of crime, and the high gains afforded to perpetrators, ensures that motivation for recidivists remains strong.

Manifestations of crime emanating from the IPR domain are among the most formidable challenges for workers in criminal justice systems worldwide. As society evolves and technology goes forward our understanding of the origins of criminality must be continuously revised. The persistence, prevalence and seriousness of IPR and cybercrime offending demands a greater response from the international community.

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3. Regulation (EU) No 386/2012 of the European Parliament and of the Council on entrusting the Office for Harmonization in the Internal Market (Trade Marks and Designs) with tasks related to the enforcement of intellectual property rights, including the assembling of public and private-sector representatives as a European Observatory on Infringements of Intellectual Property Rights [2012] OJ L 129/1.
4. Council Decision 2009/371/JHA establishing the European Police Office (Europol) [2009] OJ L 121/37