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NEED TO IMPLEMENT A HIGHLY-PERFORMING INTELLECTUAL-PROPERTY MANAGEMENT IN THE TECHNICAL-ENGINEERING FIELD

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Abstract: *In the last 20 years, many industrial companies, both at a national, and at an international level, have been confronted to a serious problem, namely: fight against unfair competition. In this article, we will elucidate which are the most threatening activities in counterfeiting, piracy, fake etc.; and, at the same time, we will explain why the implementation of a new type of management is needed, within the industrial enterprises, to wit: intellectual-property management. We will explain what supposes the training of a highly-performing intellectual-property management. Likewise, we will propose a few useful tools of highly-performing intellectual-property management, applicable within the industrial companies, which will find their solution, after a brainstorming session, organized with experts and with experienced academic teaching staff. Then, all solutions presented within the brainstorming session will undergo a multi-criteria analysis; and, in the end, the solution with the highest score will be chosen.*

Keywords: *counterfeiting, piracy, fake, protection, brainstorming, multi-criteria analysis, solutions*

1. INTRODUCTION

The management is the art and science to make the others act so that an organization's objectives should be attained; it is the process whereby the goals are determined and fulfilled, through the achievement of basic, specific, functions, in guiding and enhancing the human resources. [5]

Making decisions is a critical part of all managerial activities [5]; the decisions as regards the protection measures against intellectual-property rights should be part of a modern and absolutely necessary management modern, called: intellectual-property management.

The managers' incorrect and unconscious decisions, with respect to the protection

measures against unfair-competition activities may cause great losses, inclusively the bankruptcy of the industrial companies; and not only.

In the following, we will explain which are the unfair-competition facts, as well as what supposes combating them, with a view to protecting the industrial companies against counterfeiting, piracy, fakes etc.

2. FIGHT AGAINST UNFAIR COMPETITION

In the recent years, the definition of the *counterfeit* concept has been modified several times. Even in the best-known specialized dictionaries, this notion is explained in relatively vague terms. No distinction appears

anywhere, between the notions of piracy, counterfeit and fake. In most specialized dictionaries, all three notions are linked to the intangible “brand”. This fact limits the detection of this crime. [4]

As previously explained, the definitions afferent to the notion of *counterfeit* are numerous; therefore, we have chosen a few sources, such as dictionaries and special industrial-property laws [3]

In this way:

A. In the Explanatory Dictionary of Business Terms [6], “**Counterfeit** is [only] the unauthorized representation of a trademark, which occurs in the case of identical or similar goods, as the goods for which the trademark is registered, with a view to deluding the consumer that (s)he purchases original merchandise.”

B. According to DEX '98 [2], “**to counterfeit** means to reproduce an original document, an object, preparation, with fraudulent purposes, presenting it as authentic; to falsify.”

C. According to the “Dictionary of Synonyms” “**to counterfeit** means to falsify, to distort, to simulate.”

D. According to WEBDEX [7], “**to counterfeit** means to purposefully distort, presenting as authentic; to falsify.”

Although the specialized dictionaries only managed to define briefly the concept of *counterfeit*, we will show that nor do the special laws manage to define the notion, clearly and completely.

As a result of the analysis on the **Law no. 66/2010**, one can see that the Art. 83 specifies three sorts of crime (counterfeiting; unlawfully putting into circulation a product with either an identical or a similar mark to a trademark; and putting into circulation products with geographic indications), yet, in the art. 35, par. 2, the definition of the action of *counterfeit* includes not only putting into circulation, but also other activities. [4]

Only the Law no. 296 from June 28th, 2004, as regards the Code of Consumption, greatly amends the presentation of these notions. The art. 9 stipulates: [4] “There are forbidden the importation, manufacture, distribution, as well as the commercialization of the products - which are falsified or

counterfeited, which are dangerous, whose security parameters are noncompliant; possibly affecting therefore the consumers’ life, health or security”.

Nevertheless, in DEFINITIONS, the same gap appears: both the counterfeited product and the falsified product only refer to the brand: [4] “In the sense of the legislation as regards consumer protection, the terms and expressions below are defined in this way:

...32. COUNTERFEIT PRODUCT – “any good, including its package, in whose case, an identical mark to a trademark is used without authority; or the product that cannot be differentiated, in its essential aspects, from a branded product, whereby the lawful rights incumbent on the legal holder of the respective mark are infringed”.

33. FALSIFIED PRODUCT – “product in whose case the brand identification elements – name, logo or industrial design – lawfully registered, were altered, with a view to deceiving upon its origin, from products that were not manufactured by the legal holder of the brand or a duly authorized agent; or, on whose case, the trademark was used without the owner’s assent;...” Obviously, from these definitions, no difference results between COUNTERFEIT and FAKE. [4]

Nor does the law no. 344 from 29/11/2005 as regards some measures meant to ensure the observance of the intellectual-property rights, in the case of the customs-clearance operations bring the desired amendment: Art. 3. - (1) In the sense of this law, the terms and expressions below have the following meaning:

...11. COUNTERFEIT GOODS:

a) “any commodity, including its package, which bears an identical mark or an undistinguishable mark, in its essential aspects, from a trademark for a product or a service, legally registered for the same type of goods; infringing, therefore, the rights incumbent on the legal holder of the respective mark.”

b) “any symbol of a trademark, for a product or a service (including logo, label, self-adhesive, brochure, instructions for use or guarantee document, which bear such a symbol) even if it is presented separately and



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which is in the same situation with the goods mentioned at letter a);”

c) "any package that bears brands of counterfeited products, presented separately, under the same conditions as the goods defined at letter a).”

12. PIRATED GOODS:

“All copies manufactured without the consent given by the right holder or by the duly authorized agent, in the manufacturing country – which are manufactured, directly or indirectly, after a product bearing the copyright or related rights; or of a right on the industrial designs and models; if making such copies constituted an infringement of the respective intellectual-property right;”

13.GOODS INFRINGING AN INTELLECTUAL-PROPERTY RIGHT

- a) counterfeit goods;
- b) pirated goods;
- c) “goods infringing the rights upon a patent or an additional protection certificate or a geographical indication or a variety patent.”

(2) “To the goods mentioned at paragraph (1) point 13, where applicable, any mold or die shall be assimilated, destined or adapted to manufacturing such goods, that infringe an intellectual-property right, provided that the use of such molds or dies should infringe the right holder.”

The complete and comprehensive definition as regards combating unfair competition (counterfeit, piracy, fake), based on the references made by the Law no. 298/2001, is: “manufacturing, offering for sale, sale, importation, in general commercial exploitation, storage, use or putting into circulation, reproduction, with a view to manufacturing products with an identical aspect – unlawfully, to wit without the assent given by the holder of the industrial property

right, during its validity and after its having been rendered public.” [4]

This definition can be schematically shown, as follows, in figure 1: [4]

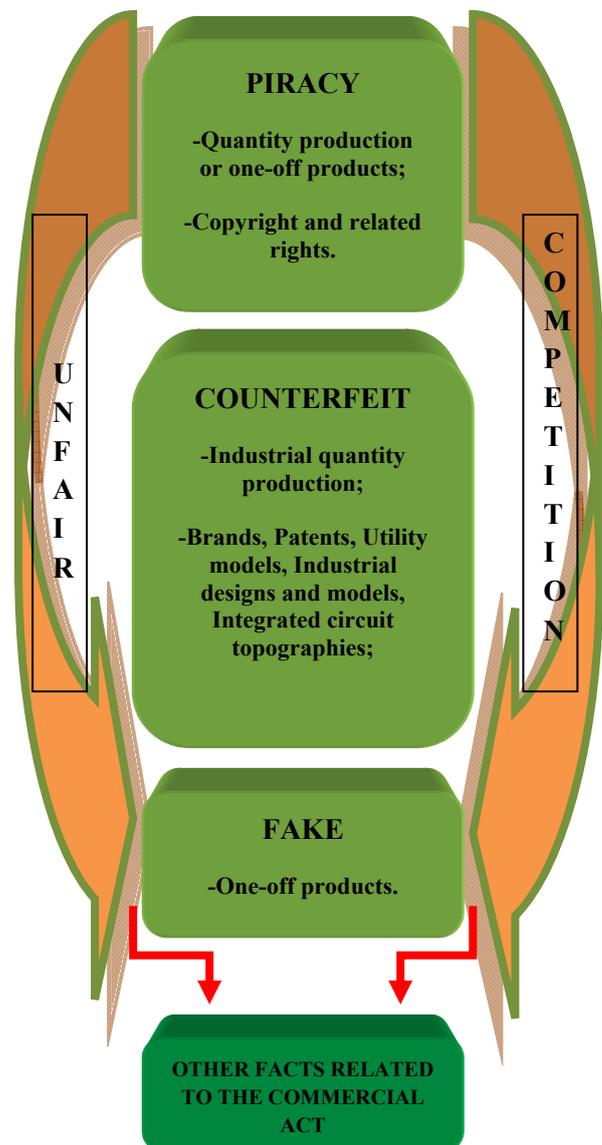


Figure 1. Correct understanding of the notions of counterfeit / piracy / fake, in integrated form.

3. NEED TO TRAIN A HIGHLY-PERFORMING INTELLECTUAL-PROPERTY MANAGEMENT

In order to define the intellectual-property management, we propose the following definition:

Intellectual - Property Management represents the sum of the knowledge referring to the legislation afferent to the protection of the intellectual property, the awareness of the preventive active forms, as well as the awareness of the legislation afferent to the action taken against the activities of unfair competition, counterfeit, piracy etc. as well as their application, with a view to diminishing the risks specific to intellectual property.

The actions of: intellectual theft, unfair competition, counterfeit, unauthorized use, plagiarism, bankruptcy, economic espionage, piracy, fake etc., “threaten” the product to be launched on the market. After the launch of the product on the market, it runs the risk of suffering from all these actions. In order to prevent the risks specific to intellectual property, a new type of modern management, to wit **intellectual-property management** is needed.

Forming a highly-performing intellectual property management supposes the following steps: [4]

1. Knowledge of the protection legislation;
2. Knowledge of the preventive active forms;
3. Knowledge of the legislation afferent to the action taken against unfair competition, counterfeit, piracy, fake etc.

In terms of the legislation afferent to the protection of intellectual property, we will mention the most important laws, namely:

- Law no. 64/1991 as regards the patents;
- Law no. 11/1991 as regards combating unfair competition;
- Law no. 129/1992 as regards the protection of industrial models and designs;
- Law no. 8/1996 as regards the copyright and related rights;
- Law no. 84/1998 as regards the trademarks and geographic indications;

- Law no. 350/2007 as regards the utility models;
- Law no. 337/2005 for amending and supplementing the Law. 16/1995 as regards the protection of the integrated-circuit topography.

4. STUDY ON THE IMPLEMENTATION OF THE INTELLECTUAL-PROPERTY MANAGEMENT

In previous works [4], five main categories of risks specific to intellectual property were identified, to wit:

1. Risks of conception/creation;
2. Risks of specific production P.I.;
3. Risks of marketing;
4. Risks of administration;
5. Social risks.

With a view to implementing a highly-performing intellectual-property management, within each organization, an analysis of the intellectual-property risks, as well as the application of some useful intellectual-property management tools are needed. Hence, the risks will be diminished

Therefore, in order to analyze the risks specific to intellectual property, we propose the achievement of a SWOT analysis, which might be adapted and used, as useful tool, within the industrial companies.

In order to apply the **SWOT analysis, specific to the intellectual-property risks**, within industrial enterprises, a **Brainstorming session** was organized, where the following solutions were proposed:

- **Elaboration of a working panel** of the probable intellectual-property risks, meant to help managers identify these risks, in time.
- **Achievement of a general scheme afferent to the SWOT analysis** on the risks specific to intellectual-property, which might be adapted to needs of all industrial companies.
- **Elaboration of a working scheme** with technical and economic solutions of intellectual-property protection, applicable within the industrial companies.
- **Organization of periodical meetings** with a view to analyzing and assessing the intellectual-property risks, in time.



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- **Implementation of a managerial strategy** afferent to intellectual property, with a view to protecting the intellectual capital, within the industrial companies.
- **Clinching collaboration contracts** with the intellectual-property experts.

Table 1. Determination of the weight of each criterion.

	PIDA	PCMF/P/S	PCDI	PCIB	s/S EAI	PPACN	Points	Level	Y1
PIDA	1/2	1	0	0	0	1	2.5	4	3.33
PCMF/P/S	0	1/2	1	1/2	1	1	4	1	3.66
PCDI	1	0	1/2	1/2	1	0	3	3	3.5
PCIB	1	1/2	1/2	1/2	1	0	3.5	2	3.6
s/S EAI	1	0	0	0	1/2	0	1.5	5	4
PPACN	0	0	1	1	1	1/2	3.5	2	3.6

In order to carry out a comparative evaluation of all these solutions found within the Brainstorming session, a **multi-criteria analysis** was proposed.

This **multi-criteria analysis** can be achieved in **five stages**, which are not necessarily successive.

Stage 1: Criteria determination:

A "criterion" is the expert's clear and well defined viewpoint, whereby (s)he defines, individuates and defines certain characteristics or properties imposed on the object of analysis: [1]

With reference to our study, the following **criteria to characterize risk, in intellectual property**, were identified:

1. Probability to infringe the copyrights (**PIDA**);
2. Probability to counterfeit the trademarks of company or of products/services (**PCMF/P/S**);
3. Probability to counterfeit the industrial design (**PCDI**);
4. Probability to counterfeit the patented inventions (**PCIB**);
5. Under/overestimations of the intangible assets (**s/S EAI**);
6. Probability to produce the unfair-competition acts (**PPACN**).

After the identification of the risk-characterization criteria, in intellectual-property, the weight coefficients for each criterion will be calculated, as shown in table 1.

According to our study, several variants were chosen to reduce specific risks of intellectual property. The grade will be granted to each variant, according to each criterion. One variant will be analyzed, in turn, in the light of each criterion, until all variants are treated. This calculation shall be done in a table, called matrix of consequences.

Identification of variants to reduce the risks specific to intellectual property:

Variant 1. Elaboration of a working panel of the probable intellectual-property risks, meant to help managers identify these risks, in time.

Variant 2. Achievement of a general scheme afferent to the SWOT analysis on the risks specific to intellectual-property, which might be adapted to needs of all industrial companies.

Variant 3. Elaboration of a working scheme with technical and economic solutions of intellectual-property protection, applicable within the industrial companies.

Variant 4. Organisation of periodical meetings with a view to analyzing and assessing the intellectual-property risks, in time.

Variant 5. Implementation of a managerial strategy afferent to intellectual property, with a view to protecting the intellectual capital, within the industrial companies.

Variant 6. Clinching collaboration contracts with the intellectual-property experts.

In the following, a grade will be given to each variant, in the light of each criterion.

Then, the consequence of the different weight, afferent to each criterion, will be considered; the table 2, then the table 3 will be filled in: the grades will be magnified (by lines) with the importance coefficient.

	PIDA	PCMF/P/S	PCDI	PCIB	s/S EAI	PPACN
Variant 1	8	8	9	8	8	9
Variant 2	10	10	10	10	10	10
Variant 3	8	10	8	8	8	8
Variant 4	8	8	8	9	9	9
Variant 5	9	10	10	10	10	10
Variant 6	8	8	10	9	9	10

Table 2. Giving a grade to each variant.

In table 3, we made the following notations: C- criterion; V- variant; Y1- weight coefficient.

According to table 3, we multiplied the grades for each variant in table 2, by the weight coefficient obtained in table 1.

RESULT INTERPRETATION:

As a result of the calculation effectuated in table 3, we noticed that the greatest sum (216.9) ranks variant 2 first, followed by variants 5 with a score of 213.57, variant 6 ranks third with a score of 195.32, variant 4 ranks fourth, with a score of 184.72, variant 3

ranks fifth, with a score of 180.84 and variant 1 ranks sixth with a score of 180.62.

In line with the result interpretation, the variant with the highest score was chosen, to wit variant 2, which referred to the **Achievement of a general scheme afferent to the SWOT analysis on the risks specific to intellectual-property**, which might be adapted to the needs of industrial companies, which is meant to help managers identify these risks in time, with a view to implementing a managerial strategy specific to intellectual property.

	C 1	C1 x Y1	C 2	C2 x Y1	C 3	C3 x Y1	C 4	C4 x Y1	C5	C5 x Y1	C6	C6 x Y1	TOTAL
V. 1	8	26.64	8	29.28	9	31.5	8	28.8	8	32	9	32.4	180.62
V. 2	10	33.3	10	36.6	10	35	10	36	10	40	10	36	216.9
V. 3	8	26.64	10	36.6	8	28	8	28.8	8	32	8	28.8	180.84
V. 4	8	26.64	8	29.28	8	28	9	32.4	9	36	9	32.4	184.72
V. 5	9	29.97	10	36.6	10	35	10	36	10	40	10	36	213.57
V. 6	8	26.64	8	29.28	10	35	9	32.4	9	36	10	36	195.32

Table 3. Raising grades with importance coefficient.



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SWOT ANALYSIS OF THE RISKS SPECIFIC TO INTELLECTUAL-PROPERTY			
Internal factors of P.I. risks:			
STRENGTHS: Efficient management of a modern enterprise; Right to produce/commercialize; Quality/ assortment of manufactured goods; Protection of I.P. rights;	Exploitation modalities: Highly-performing management of I.P.; Protection measures specific to I.P.;	WEAKNESSES: Inexistence of highly-performing management of I.P.; Lack of protection measures specific to I.P.; Managers' lack of awareness on the possible I.P. risks.	Reduction modalities: Managerial strategies of protection against unfair-competition acts, piracy, fake, intellectual theft etc.
External factors of P.I. risks:			
OPPORTUNITIES: Rise in intangible assets, by the enhancement of patents, utility models, integrated-circuit topography models etc. Assignment contracts.	Exploitation modalities: Long-term profits, as well as stability of the enterprise and employees. Investment in the company's intellectual property.	THREATS: Abusive protection (confusion +association) of an industrial design / model vs. trademark; Piracy in design /cct ; Counterfeit in design /cct Intellectual fraud in design / cct; Abusive protection of a trademark vs. business name; Abusive protection (confusion +association) of a field vs business name; Abusive protection of a business name vs. trademark; Plagiarism in design /cct; Production of goods infringing DPI; Unfair competition in production; Unfair competition in trade; Commercialisation of goods infringing DPI.	Reduction modalities: patent; utility model certificate; industrial design-model certificate; integrated-circuit topography circuit; specific provisions in the legislation against unfair competition; business name; trademark certificate; specific provisions in the legislation against unfair competition ; competition law, normative acts referring to consumer protection etc.

Table 4. SWOT analysis of the risks specific to I.P.

5. CONCLUSIONS & ACKNOWLEDGMENT

The general scheme of the SWOT analysis on the risks specific to intellectual property,

which may be adapted to the needs of highly-performing management, namely: Intellectual-Property Management, is a useful tool, meant to help managers identify the intellectual-property risks in time, and to implement one or

several strategies, with a view to combating them, likewise resorting to the risk-reduction modalities (according to the scheme), by patent, by utility model certificate, by industrial design-model certificate, by integrated-circuit topography certificate, by business name, by trademark certificate, by specific provisions in the legislation afferent to unfair competition etc.

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REFERENCES

1. Bobancu, S., *Creativity and Invention. Course Notes*, electronic publication (2012).
2. Explanatory dictionary of the Romanian language (1998).
3. Fantana, R. S., *A chrestomathy the notion of infringement in Romanian legislation. Consequences*. Scientific Session of the National Chamber of Industrial Property Attorneys in Romania , 3rd Edition , Bucharest (2007).
4. Fantana, R. S., *Research on integrated management of intellectual property risk technical and economic*, Thesis, Brasov, (2008).
5. Ursachi I., *Management*, ASE, Bucharest (2001).
6. Walter G., *Explanatory Dictionary of Terms of Business*, World Trade Organization , IRECSON Publishing Institute, (2006).
7. www.webdex.ro/online/noul_dictionar_explicativ_al_limbii_romane.