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Intellectual Property /IP/ Research in Business Education

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Abstract
The main aim of teaching and training in business education on intellectual property /IP/ is provided by presenting to the students the matter of IP research in the following aspects: product and technological innovations, created in the company, and their protection as IP rights and business indicators as graphic design, logos and corporate symbols and logos and their protection as IP rights.
To fulfill this aim the educational process includes: research for the protected innovations as patent /P/ or utility models /UM/ using the web sites: www.epo.org; research for the protected industrial design /ID/ in the product field using the web sites: www.bpo.org, www.oami.europa.eu u www.wipo.int/hague; research for the protected trade marks /TM/ on the web sites: www.bpo.org, www.oami.europa.eu u www.wipo.int/madrid. Through IP research students can form and present well-founded IP strategy in aspects: opportunities for protection of new product or technological innovations as IP rights (P, UM, ID) and business indicators as graphic design, logos and corporate symbols and logos and their protection as IP rights (TM, ID) in counrty or abroad; identify strategies of the company in the field of IP protection; present active license agreements in the field of IP. As a final result: students can form perspective variants of company IP strategy as a complex of product or technological innovations and business indicators as IP in the purpose of the strategic aim: to achieve sustainable competitive strategy on the market.
Keywords: *intellectual property, patent, utility model, industrial design, trade mark*

Introduction
The main aim of teaching and training in business education on intellectual property /IP/ is provided by presenting to the students the matter of IP research in the following aspects: product and technological innovations created in the company and their protection as IP rights, as well as business indicators as graphic designs, corporate symbols and logos and their protection as IP rights.
To fulfill this aim the educational process includes: research for the protected innovations as patent /P/ or utility models /UM/ using the web sites: www.epo.org; research for protected industrial designs /ID/ in the product field using the web sites: www.bpo.org, www.oami.europa.eu and www.wipo.int/hague; research for protected trade marks /TM/ on the web sites: www.bpo.org, www.oami.europa.eu and www.wipo.int/madrid.
Through IP research students can form and present well-founded IP strategy in aspects: opportunities for protection of new product or technological innovations as IP rights (P, UM, ID) and business indicators as graphic design, logos and corporate symbols and logos and their protection as IP rights (TM, ID) in the counrty or abroad; identify strategies of the company in the field of IP protection; present active license agreements in the field of IP. As a final result: students can form perspective variants of company IP strategy as a complex of product or technological innovations and business indicators as IP in the purpose of the strategic aim: to achieve sustainable competitive strategy on the market. [1]
Particullarly, IP search consists of the following main directions and their characteristics:
As we know IP system includes patents, utility models /UM/, industrial designs /ID/, trade marks /TM/ and others results of human intellectual efforts.
IP research is research of the main objects of IP regarding the business implementation as follows:

1. Product and technological innovation;
2. Business indicators.

1. Research for product and technological innovation
IP rights on product and technological innovations which are new and industrially applicable, could be obtained in the following main legal ways:
A/ patent for invention;
B/ certificate for utility models;

C/ certificate for industrial designs (*This paper will not focus on plant varieties, breeder's achievements, topologies on integrated circuits as legal option for IP protection of innovations)*.
According to the legislative system in IP in Bulgaria there are different possibilities of IP protection for product and technological innovations relating to the criteria for issues of patent for invention or certificates for UM or ID. There are the following:

1. for patent – this is a legal option for IP protection of product and technological innovations. The criteria are the following: world novelty, inventive step and industrial application;
2. for UM – the same as criteria of patentability, however the inventive step is lower;
3. for ID – world novelty and originality /individual character/.

Patented invention /including applications for patent that will be published till 18 month of the date of application/ and registered UM could be found on the web site: www.epo.org.
rinciple method for patent, UM or ID search includes the following steps [2]:

Module A: Define the parameters of a patent/design search

Defining the objectives of the study – trends of the specific product and/or technological field; options for patentability of the specific new decision of product or technology; patent/design purity – specific legal term of non infringment of other's patent rights;
Determination of the range of countries – territory of BG, EC, others relating the market business aims;
Determination of the depth of search – examples: in research of trend the common depth is around 20- 25 years; in research of patentability – the period for research starts with the first application or issued IP documents;
Determining the way of search of DB of patent/design documentation.
We differ 3 types of search:
A. *search based on IP classifications in the innovations field* – International patent classification /IPC/ or European classification /ECLA/ for patents and UM, Locarno classification for ID.
For patents and UM search through ECLA index of interested product of technology field
identify the classification index according to the ECLA:

A – human necessities;
B – performing operation, transportations;
C – chemistry, metallurgy;
D – textile, paper;
E – fixed constructions;
F – mechanical engineering, lighting, heating, weapons, blasting engines, pipes;
G - physics;
H – electricity;
Y - general tagging of new technological developments.

As example: A 61 – Medical or veterinary science; hygiene; A 61 K – food supplements.
For ID generally we may use the following Locarno indexes - 32 classes as whole or classification index according to the Locarno classification of ID – as examples in general:

- 06 – furniture;
- 09 - packages;
- 12 – transport means;
- 14 – communication equipment;
- 32 – graphic symbols, logos;
- others classes to the 32nd as total number.

Proceeding the search on the DB of 90 millions patents all over around the world from 1836 until today includes 39 countries and EC as a regional organization and WIPO /World IP organization/ as international organization for ID protection.
B. *search through the name of interested product of technology* as a field generally – like 'cars', 'engine', 'toys', 'jewellery';
C. *search through the name of the company or natural person – subject - owner* of the patent/ UM/ ID;
D. *search through the name of natural person – creator* /inventor of designer/ of the patent/ UM/ ID;
E. *search the specified patent, UM or ID number*

Module B: proceeding the search as a substance

Different types of ways or search start with the action opening of the window 'patent/ design search' on the web site of EPO/ OAMI or other web site and putting the identified index; name of the field of

product, key term or the name of the subject – holder or author of the patented invention or registered UM/ ID;
open the window 'patent/ design search' on the web site of EPO and put the identified index;
All types of patent search start with:
1st step: open the window 'patent search' on the web site of EPO/ OAMI and put the identified index;
2nd step: put the identified index, name or number in the specific place;
3rd step: proceeding the search on the DB of millions patents;
4th step: systemize the displayed on the screen results following the defined earlier aims.
The main digitally based information sources for this search are the following web sites:

- www.epo.org - for patented and applied inventions; for registered UM;
- www.oami.europa.eu - for protected ID on the territory of EC;
- www.wipo.int/hague - for protected ID on the territory of 67 countries-members of Hague agreement;
- www.bpo.org - for patented and applied inventions; for registered UM, for protected ID on the territory of Bulgaria;
- www.tmdn.com - data bases for more than 46 countries all over the world.

Most often in Internet class we use the websites of EPO and OAMI because of the following the main arguments:

- complex and specified information for P, UM and ID;
- fast and friendly organised.

Module C: Systematization of the collected information

Generally, the systematization of the collected information depends on the aims of the search.
The systematization should pay attention and be specialized as follows:

- for different countries;
- for each country and different companies;
- for different companies and/or the names of the inventors;
- for chosen product and technology fields.

As a result: for just few minutes we have systematic reliable information for patented innovations with current legal status and scope of protection from about 60 millions records with almost worldwide coverage.

Module D: formation of conclusion related to the search aims in order to identify:

- opportunities for protection of product/ technology decisions as patent, UM and/or ID;
- trends in specific product/technology field;
- implemented strategies of Bulgarian and foreign companies for protection of their own product or technology;
- acting license agreements on protected product or technology;
- business intention an aim for future cooperation in the product/ technology field

2. Research for business indicators

IP rights on business indicators could be obtained in the following main ways (This paper will not focus on geographical indications, domain names and company names as IP protection):
A/ as trade marks;
B/ as industrial designs.
According to the IP legislative system in Bulgaria there are different possibilities of IP protection for business indicators relating to economic aims and legal options for obtaining of IP document of registration /the criteria for their registration/ There are the following in general:

- for TM – sign, which is capable to distinguishh the goods and serviced of one person from those of others. It may be word, drawings, figures, shape of goods, their packaging, colours and others.
- for ID – appearance of the product, resulting from the shape, lines, ornamentation, colours, graphic symbols, typographic typefaces, others.

Principle method for registered TM or ID search includes the following steps:

Module A: Define the parameters of the search

Defining the objectives of the study – legal option for registration of TM and/or ID TM/ ID purity – specific legal term of non infringment of other's TM or ID rights, others

Determination of the range of countries – BG, EC, others;
Determination of the depth of search – examples: in research of trend the common depth is around 20- 25 years;
Determining the way of search of DB of TM/ID documentation.

We differ 3 main types of search:

- search through the classification index of interested TM/ID /like "package' classes 6 – for TM; classes 5, 9 for ID/;
- search through the name of the company or natural person – subject - owner of the TM/ID;
- search through the name or N of the representative of the company or natural person.

Module B: proceeding the search

All types of TM/ID search start with:
1st step: open the window 'TM name' on the web site of OAMI/WIPO;
2nd step: put the identified index, name or number in the specific place;
3rd step: proceeding the search on the DB of millions TM/ID.

The main digitally based information sources for this complex search are the following web sites:

- www.oami.europa.eu - for protected TM/ID on the territory of EC;
- www.wipo.int/hague - for protected TM/ID on the territory of 167 countries-members of WIPO/ Madrid or Hague agreements, Madrid Protocol;
- www.bpo.org - for patented and applied inventions; for registered UM, for protected ID on the territory of Bulgaria;
- www.tmdn.com - data bases for more than 46 countries all over the world;

A. search through classification index of interested TM and/or ID

Practically, we should identify the classification index according to the Nice classification for TM or Locarno classification for ID /for business indicators the search could be provided for the classes: 14 – computer interface, pictures, drawings, 19 – office equipment; 32– logos, graphic ornamentation, etc./. After that we should open the window 'TM name' or 'design' on the web site of www.tmdn.org and put the identified world, sign, graphics and than proceeding the search on the DB of millions TM/ID all over around the world, included more than 46 countries, WIPO, OAMI and other international organizations in IP.

Module C: Systematization of collected information/ DB

- for different types of TM – word, figurative and combined;
- for different classes and/or countries;
- for each country and different companies;
- for different companies and/or classes;

As a result: for minutes we have systematic reliable information for registered TM/ID with current legal status and scope of protection from about 60 millions TM/ID with almost worldwide coverage.

Module D: formation of conclusion related to the search aims in order to identify:

- opportunities for protection of signs, logos, company names or others as TM and/or ID;
- legal options for protection of specific sign, logo, others;
- implemented strategies of Bulgarian and foreign companies for protection of their own product or technology excellence;
- acting license agreements for TM/ID;
- business intention /an aim/ for future cooperation in the field of TM/ID

The relationship with the management aspects of the company's IP as a business resource in two directions: innovations and business indicators, is provided by placing each student on an individual practical work according to individual preferences and abilities of the students. Training is performed through a combination of lectures, seminars, discussions and individual tasks. Slides, PPP, online resources, student papers and case studies are used. The necessary resources for training are: flip chart, PPP and computer class with Internet connection.

References

[1] Markova. M., Design management, Publ. UNWE, S., 2010

[2] Borisov, B., Intellectual property of the industrial firm, Publ. UNWE, S., 2012