

# Intellectual properties (IP) search system for “Exchange of Technologies” or patent organizations.

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## **Abstract:**

*Prezentace popisuje jednu z kapitol Dizertační Práce s názvem „Technologická burza a předpoklady pro její vznik v České Republice“. V úvodní části definují pojem „Technologická burza“ a důvod vytvoření vyhledávače. Hlavní část prezentace je věnovaná popisu numerického vyhledávacího systému vytvořeného pro vyhledávání vhodných nehmotných statků se zaměřením na jejich budoucí hospodářské využití.*

## **Key words:**

*IP – intellectual property, bourse of technologies, technological exchange, patent, trademark, copyright, know-how, innovations, IP searching system, IP database.*

## **1. Introduction:**

In the end of 20th and beginning of 21st century in the world appeared segment of the so-called high-tech enterprises. The cost of intellectual property rights of these enterprises exceeds several times greater than the cost of tangible property, and reaches significant amounts. An example would be high-tech U.S. stock indices. Companies participating in the listing of high-tech indexes are mostly strong, mature companies. Trading on the Stock Exchange is one of their options to raise the capital advantageous. Small businesses and innovative collectives are not able to enter into this listing and are forced to raise capital other ways. Technological Exchange has to become one of the following ways. The Exchange would attract capital in IP at the level of implementation in production, or the final stage of the development of IP. Trading in the Technology Exchange will be held at the usual scenario of the stock exchange and more specifically, the common stock trading. The novelty consists in the fact that companies that are traded on the Technology Exchange will have exclusively IP and nothing else. And also managers of Exchange will help to solve organization problems in period of preparation for trading (IP protection strategy, evaluation and other questions, if necessary).

The main technical problem of large-scale IP trading organization is the imperfection of the system evaluation. The secondary problems include several dozen of items, among which an important role is searching of the necessary intangible property. All knows about the existence of intellectual property databases, but to find in them something interesting or necessary without crosstalk is practically impossible. With this problem I've encountered this problem one month ago and then I decided to dedicate this thread one chapter of my dissertation.

In this presentation I will try to introduce you to the results (not definitive) of my activity.

# Patents and Utility Models Database Report

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This database contains some Czech published patent applications, patents and utility models.

You can also search for [title pages of Czech patent documents](#)  by their numbers, or search for [full patent publications](#).

**Type in the search criteria**

(21)	Application number		<input type="text"/>	e.g.: 1988-535
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(54)	Title	<input type="checkbox"/> *	<input type="text"/>	e.g.: ventil%
(71/73)	Applicant/Holder	<input type="checkbox"/> *	<input type="text"/>	e.g.: Skoda
(72/75)	Inventor	<input type="checkbox"/> *	<input type="text"/>	e.g.: Novak%
(22)	Filing date	=	<input type="text"/>	e.g.: 15.5.2000
(32)	Priority Date	=	<input type="text"/>	e.g.: 12.4.1995
(40)	Publication Date	=	<input type="text"/>	e.g.: 04/1995
(47)	Registration Date	=	<input type="text"/>	e.g.: 12/1997
(51)	IPC		<input type="text"/>	e.g.: B 60 N 2 / 42
(57)	Abstract	<input checked="" type="checkbox"/> #	<input type="text"/>	e.g.: Ventil% #

It is the only way to find IP in the Czech Republic  
<http://www.upv.cz>

\*) When checked, searching data without diacritic marks.

#) There is not full-text search possibility in abstracts of EP files.

Notice: Attributes "Title", "Applicant/Holder" and "Inventor" may be searched full-text. If you put the search term in quotes, it will search for data for the appropriate attribute as a single text entry. For example, if you like to find all patent applications which contain the term 'vehicle seat' anywhere in the title, enter your search term in the

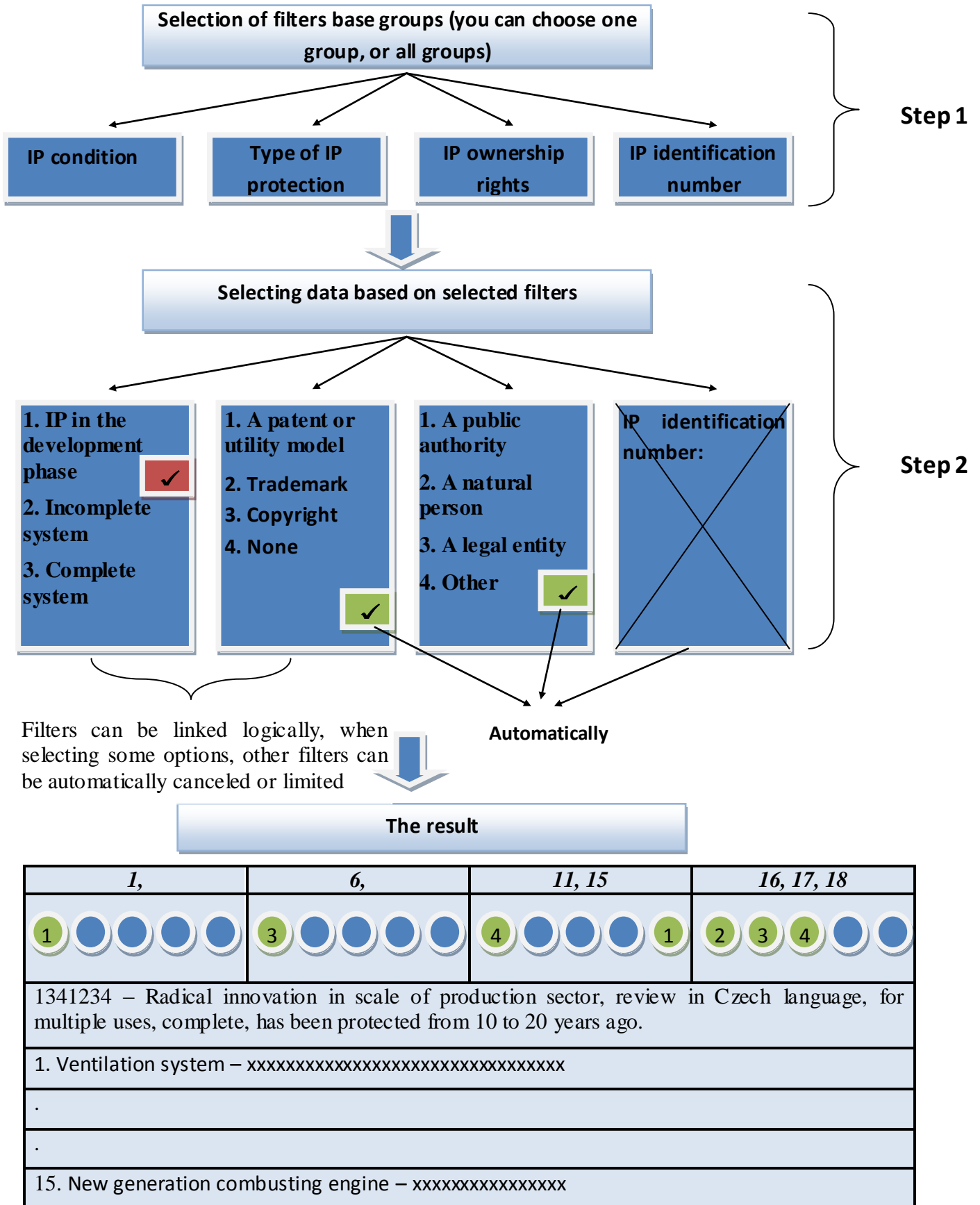
**Pic. 1.** Patent and Utility Models Database Report, source - <http://www.upv.cz>

Small database of projects and innovative solutions containing the investment funds, some institutions, government agencies etc. Searching in the databases is provided mainly by using key words and sometimes the simplest filters. This databases does not deserve too much attention due to their limitations. More serious organization registering patents generally does not differ from the above here. WIPO does not provide the necessary data also. Exchange IPXI is in the initial stages of development and does not have its databases (<http://www.ipxi.com>). I have checked hundreds of websites and search engines, they are identical, the search be based on keywords and a simple filtration. As a result, we have 99.9% of unnecessary information, search engines simply do not work well.

By studying the literature concerning IP, I found an interesting base registering IP that use in large enterprises and institutions. The filter system was built on a numerical basis. I decided to use this base for my new system.

Entering data into to the system administration can be carried out by the inventors, or the owners of IP. With electronic or paper questionnaires, it should take not longer than 30 minutes. The ideal situation would be using the capacity of public organizations that are registering IP rights.

2. The scheme of the search engine:



Pic. 2. The scheme of the search engine

## 2.1. Selecting data base on selected filters

### Level of IP innovation:

1. Radical (new cycle of technological innovation and a new cycle of business)
2. Evolutionary (optimize and develop the existing technology cycles or cycles of business)

### IP branch:

1. Science
2. Education
3. Social sector
4. Production
5. Other

### Difficulty of IP applications:

1. Low (Do not need additional investment in the production and implementation, low time consumption)
2. Medium (requires an average investment in the production and implementation, average time required)
3. High (requires extensive investments in the production and implementation, high time consumption)
4. Not specified

### Complexity of IP use:

1. Separate application (without using of related IP and without additional infrastructure)
2. Applications with a combined infrastructure (without using of related IP, but using additional infrastructure)
3. Application with a combined IP (using related IP without additional infrastructure)
4. Combined application (using related IP and additional infrastructure)

### Type of IP protection:

1. A patent or utility model
2. Topography of semiconductor products
3. The design
4. Trademark
5. Company name
6. Copyright
7. Other (Local protection of some countries can have special forms or can be combined)
8. No protection

### Innovation range of IP:

1. Global scale of innovation
2. State scale of innovation
3. Sector scale of innovation
4. Business scale of innovation

### Frequency of IP use:

1. One-off
2. Multiple
3. Other

### Type of IP expected effect:

1. Environmental
2. Economical
3. Social
4. Scientific and technical
5. Integral
6. Other

### Condition of IP:

1. IP in the development phase (IP is not ready to be embodied, where is no prototype, it is not prepared to be protected etc.)
2. Incomplete system (IP is ready to be embodied, lack of protection rights or embodied demonstrator)
3. Complete system (tested and ready for use, IP rights are protected)

### Origin of IP:

1. The countries of origin (the system can be either in written, abbreviations: CZ, UK, DE, RUS, USA, etc., or the numeric character, using the list of countries from 1 to 256, the numeric form is preferred).

**IP ownership rights:**

1. A public authority
2. A natural person
3. A legal entity
4. Other

**Oldness of IP protection:**

1. Up to 1 year
2. From 1 to 5 years
3. From 5 to 10 years
4. From 10 to 20 years
5. More than 20 years

**Identification number of IP:**

1. There will be indicated the file number of the industrial property database (I assume that it will be WIPO – World Intellectual Property Organization)

**Form of IP providing:**

1. Direct sales
2. License application
3. Exchange
4. All of the above
5. Other

**IP with ended protection:**

1. Yes
2. No

**Capital supportability of IP:**

1. Unsecured IP in development
2. Unsecured phase in IP protection
3. Unsecured stage introduction of IP into production
4. Other

**Language of IP description:**

1. Language will be entered in numerical form. Possibility to choose from 40 languages (For example: 1. Mandarin Chinese, 2. English, 3. Spanish)

**Key words:**

1. Key words from review of IP, usual word filter

**IP Exchange trading:**

1. Yes
2. No
3. In process

**Economic research:**

1. Yes
2. No
3. In process

The number of filters may seem overly large, but using of all filters is not required. In the case of using all filters the result may be too limited, so you should only use those that are critical to your target. I have one not numerical filter “Key words” in my system. It will be removed, restricted or transferred. Possible transfer place can be in the final stage, in the filtering results. This filter uses in all searching engines that I know, but I understand that in this format providing work of this filter will be complicated.

Filters that are used in the searching engine have been taken from various literatures and my own vision of subject. I am sure that the filters will be subjected to correction more than once, but the system principles will remain the same.

#### 4. Interface of searching system:

Step number 1 - Filters selection – selecting the filter by clicking on the cell, second click will cancel the selection. By the holding the cursor over the cell will be called a sub window for help.

<i>1,</i>	<i>6,</i>	<i>11, 15</i>	<i>16, 17, 18</i>
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<b>Level of IP innovation</b>	<b>Innovation range of IP</b>	<b>IP branch</b>	<b>Frequency of IP use</b>
<b>Difficulty of IP applications</b>	<b>Type of IP expected effect</b>	<b>Complexity of the IP use</b>	<b>Condition IP</b>
<b>Type of IP protection</b>	<b>Origin of IP</b>	<b>IP ownership rights</b>	<b>Oldness of IP protection</b>
<b>Identification number of IP</b>	<b>Form of IP providing</b>	<b>Economic research for IP</b>	<b>Capital supportability of IP</b>
<b>IP with ended protection</b>	<b>IP Exchange trading</b>	<b>Language of IP description</b>	<b>Key words</b>

*Pic. 3. Filters selection*

Sub window for help:





















Patent, copyright, trademark and other

Step number 2 – Selecting data based on selected filters, gradual passage of all selected filters step by step.

<i>1,</i>	<i>6,</i>	<i>11, 15</i>	<i>16, 17, 18</i>
<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<b>Level of IP innovation:</b>			
1. Radical (new cycle of technological innovation and a new cycle of business)			
2. Evolutionary (optimize and develop the existing technology cycles or cycles of busyness)			























Correction is possible in any step without losing of information

<i>1,</i>	<i>6,</i>	<i>11, 15</i>	<i>16, 17, 18</i>
    	    	    	    
<b>Innovation range of IP:</b> <ol style="list-style-type: none"> <li>1. Global scale of innovation</li> <li>2. State scale of innovation</li> <li style="background-color: #e0ffff;">3. Sector scale of innovation</li> <li>4. Business scale of innovation</li> </ol>			



Correction is possible in any step without losing of information

<i>1,</i>	<i>6,</i>	<i>11, 15</i>	<i>16, 17, 18</i>
    	    	    	    
1341234 – Radical innovation in scale of production sector, review in Czech language, for multiple uses, complete, has been protected from 10 to 20 years ago.			
1. Ventilation system – xxx			
.			
.			
15. New generation combusting engine – xxxxxxxxxxxxxxxxxxxxxxx			

*Pic. 4. Selecting data based on selected filters*

## 5. Conclusion:

The IP search system based on a numerical filtering is very simple. It does not require significant hardware capacity, search can be easily implemented even with poor internet connection. The filters of the system are constructed so, as to satisfy max. possible requirements to search IP for future use. Maximal time of requirement formulation may take up to 5 minutes, minimal time up to 10 seconds. The corrections without losing entered information should be available, therefore, the use of big filters number is not critical. Interface of searching system is friendly and understandable to any user (thanks to pop-up prompts largely).

I have never met such systems in my practice, despite the fact that I sought that searching engines purposefully. This work could serve as a basis for the search engines in organizations related to technologies transfer, patent offices, and exchanges of technologies, or in databases of high-technological companies.

***Symbols list:***

IP – intellectual property

WIPO – world intellectual property organization

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