

From Patent Information to Patent Research

(Edition - 20180725)

*Oleksii Vasyliev,
Ph.D., Patent Attorney,
Kyiv, Ukraine*

From Patent Information to Patent Research

- Patent Information, Patent (Scientific & Technical) Searching, Patent Analysis – general overview
- Patent (Scientific & Technical) Searching – Main principle and stages
- Patent Analysis

Patent Information

- Sources of Patent Information
 - Patent Bulletins
 - Scientific and Patent Database, Patent Register
 - Statistics
 - IP-Law Information

Patent Information Standards and Normative Documentation (I)

- WIPO Standards (<http://www.wipo.int> – Menu: Knowledge)
 - ST.3 {Country Codes}
 - ST.9 {Bibliographic Data}{INID – Codes}
 - ST.16 {Standard Codes for Kind of Patent Documents}
 - ST.60 (Bibliographic Data for TM)
 - ST.80 (Bibliographic Data for Industrial Design)

INID - “Internationally agreed Numbers for the Identification of (bibliographic) Data”
- WIPO Classification (<http://www.wipo.int> – Menu: Knowledge)
 - International Patent Classification
 - Nice Classification (TM- goods and service)
 - Vienna Classification (TM- figurative elements)
 - Locarno Classification (Industrial Design)

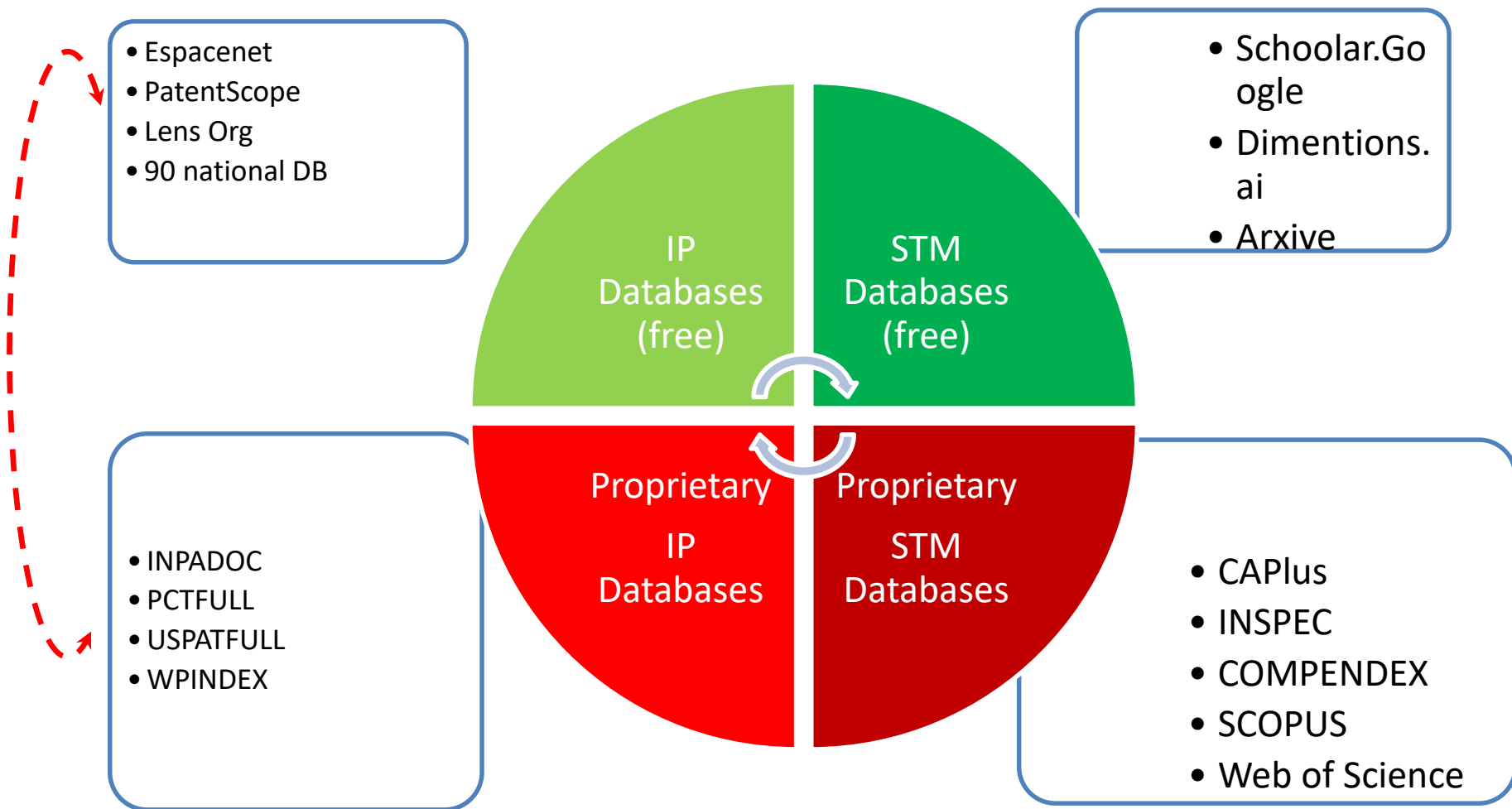
Patent Information Standards and Normative Documentation (II)

- Ukrpatent Normative Documentation (<http://me.gov.ua>)
 - [Правила складання і подання заявки на винахід та заявки на корисну модель](#)
 - [Правила розгляду заявки на винахід та заявки на корисну модель](#)
 - <http://uipv.org> БД «Винаходи(корисні моделі)> Допомога
 - ДСТУ 3574-95 – Ukrainian Standard “Patent Portfolio”
 - ДСТУ 3575-95 - Ukrainian Standard “Patent Research”

Databases' Ontology (I)

- Patent (TM, Design)^{120 DB} and STM Databases^{>400 DB}
 - International & Regional IP Offices' Databases (*full text & references*)
 - National IP Offices' Databases (*full text & references*)
 - International Patent Databases
 - Subject Patent Databases
 - Special Patent Databases
 - Universal STM databases
 - Subject STM Databases (*patent information included*)
 - Special STM Databases
 - Fulltext Publishers Archives (>5000)
 - Institutional Repositories
 - STM Information Search Portals (scholar.google.com, dimensions.ai)

Databases' Ontology (II)



Examples of Databases

- Free access
 - Worldwide.espacenet.com
 - Patentscope.wipo.int
 - USPTO.gov (US – National DB)
 - lens.org
 - Uipv.org (UA – National DB)
 - Fips.ru (RU – National DB)
- Proprietary Databases and Systems
 - INPADOC
 - WPIndex
 - TotalPatent (Lexis-Nexis) – system
 - STN International – system (>200 STM Datanase)
 - ...

WPINDEX = Derwent Innovation Index

- **Argentina (1975-)****Australia (1963-69,1983-pres.)**
Austria (1975-present) **Belgium (1963-present)**
Brazil (1976-present) **Canada (1963-present)**
China (1987-present) **Czech Republic (1994-present)**
Czechoslovakia (1975-1994) **Denmark (1974-present)**
European Pat. Off. (1978-present) **Finland (1974-present)** **France (1963-present)**
Germany (1963-present) **Germany (Utility Models) (1995-present)** **German (Dem. Rep.) (1963-1990)**
Gulf Cooperation Council (2011-present) **Hong Kong (2011-present)**
Hungary (1975-present) **India (2004-present)**
Indonesia (2010-present) **Ireland (1963-69,1995-pres.)** **Israel (1975-present)** **Italy (1966-69,1978-present)** **Japan (1963-present)**
Luxembourg (1984-present) **Malaysia (2005-present)** **Mexico (1997-present)** **Netherlands (1963-present)**
New Zealand (1993-present) **Norway (1974-present)** **PCT (WIPO) (1978-present)** **Philippines (1994-present)** **Poland (2011-present)**
Portugal (1974-present) **Rep. of Korea (1986-present)** **Romania (1975-present)**
Russian Federation (1994-present) **Singapore (1995-present)** **Slovakia (1994-present)** **South Africa (1963-present)**
Soviet Union (1963-1994)* **Spain (1983-present)** **Sweden (1974-present)** **Switzerland (1963-present)** **Taiwan (1993-present)**
Thailand (2010-present) **Turkey (2015-present)** **United Kingdom (1963-present)**
United States (1963-present) **Vietnam (2010-present)**
- Patent coverage:
 - >100 mln documents
 - 90 countries + EPO+ PCT
 - 1782 (GB), 1790 (US), 1863 (CA), 1887 (DE), ...
 - {IPC + CPC} Search +10 Fields Search + Full Text Search
 - CPC thesaurus Classification Search
 - Translation
 - EPO Registry + Patent Status (20 countries)
- Pharmacology: 1963-
- Plastics & Polymers: 1966-
- Mechanics & Electrics: 1974-
- Agro-science: 1965-
- General Chemistry and Other Technology: 1970-

CAplus

- Patent coverage:
 - >8 mln documents
 - 38 countries + EPO+ PCT
 - Chemical publication and patents from 1907
 - {IPC + CPC} Search +80 Fields Search
 - IPC +CPC thesaurus Classification Search
 - Chemical Thesaurus Searching
 - Collocation with Registry TM Databases
 - Chemical Structure Searching

Regional IP Offices' Databases

- ARIPO (via PatentScope) - African Regional Intellectual Property Organization
- LATIPAT (via PatentScope) – Latin America Countries Patent Database
- Eurasian Patent Office (via PatentScope, або <http://www.eapatis.com/>)
- EPO – European Patent Office (via worldwide.espacenet.com)

National IP Offices' Databases

Databases

- WIPO Databases and IP Office List - <http://www.wipo.int/directory/en/> (більше 80 країн)
- Ukrainian list on the basis of WIPO List http://uipv.org/ua/links_ukr.html

Examples^

- Ukrpatent - <http://www.uipv.org>
- RosPatent – <http://www.fips.ru>
- USPTO (USA) – <http://www.uspto.gov>
(<https://www.uspto.gov/patents-application-process/search-patents>)

Subject STM Databases

- Chemical Abstracts (American Chemical Society)
- INSPEC (The IET)
- Compendex (Elsevier)
-
- Integrated Information Systems (STN International, EBSCO, Clarivate Analytics, ProQuest, etc.)
 - Look in (as example) STN International (200 databases) - http://www.stn-international.com/database_list.html

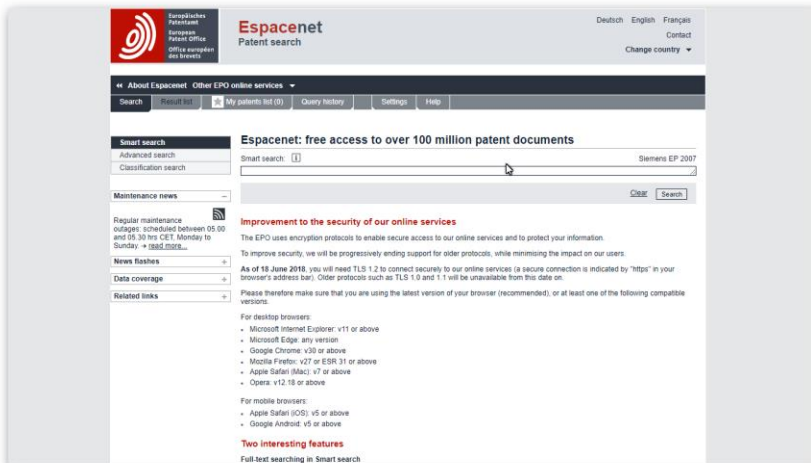
Special Patent Databases (examples)

- **LITALERT** Records for patent and trademark infringement lawsuits
- **DPCI** - Derwent Patents Citation Index™ (Derwent – Clarivate Analytics)
- **NTIS** – U.S. Government Reports Announcements
- **PCTGEN** – Nucleic Acid and Protein Sequences database (PCT)
- **USGENE** – The USPTO Genetic Sequence Database
- **RDISCLOSURE** - Research Disclosures full text database

Espacenet (EPO)

<http://worldwide.espacenet.com>

- Patent coverage:
 - >100 mln documents
 - 90 countries + EPO+ PCT
 - 1782 (GB), 1790 (US), 1863 (CA), 1887 (DE), ...
 - {IPC + CPC} Search +10 Fields Search + Full Text Search
 - CPC thesaurus Classification Search
 - Translation
 - EPO Registry + Patent Status (20 countries)



PATENTSCOPE (WIPO)

- Patent coverage:
 - >69 mln documents
 - 49 national DB + 3 Regional + PCT
 - 1782 (GB), 1790 (US), 1863 (CA), 1887 (DE), ...
 - Cross Lingual Expansion Search
 - 59 Fields Search + Full Text Search
 - IPC Search
 - CPC thesaurus Classification Search
 - EPO Registry + Patent Status (20 countries)
 - Document Translation
 - Result Export to Excel (100 – 1000 limited)

The screenshot displays the WIPO PATENTSCOPE search interface. At the top, the WIPO logo and 'PATENTSCOPE' are visible, along with a navigation bar for various languages (Mobile, Deutsch, Español, Français, 日本語, 한국어, Português, Pycckий, العربية). Below this is a search bar and a navigation menu with options like Search, Browse, Translate, Options, News, Login, and Help. The main content area is titled 'Field Combination' and features a list of search fields with dropdown menus and checkboxes. The fields include: Front Page, WIPO Publication Number, Application Number, Publication Date, English Title, English Abstract, Applicant Name, International Class, Inventor Name, Office Code, English Description, English Claims, Licensing availability, and Inventor Name. Each field has a dropdown menu and a checkbox. The 'Inventor Name' field has an 'Is Empty' option with radio buttons for N/A, Yes, and No. At the bottom, there is a 'Language' dropdown set to 'English', a 'Stem' checkbox, an 'Office' dropdown set to 'All', and a 'Specify' link. There are also 'Search' and 'Reset' buttons.

WIPO – not only patent DB

- PATENTSCOPE
- Global Brand Database
- Madrid Monitor
- Global Design Database
- Hague Express

WIPO Tutorials and Handbook

<https://patentscope.wipo.int/search/en/tutorial.jsf>

- What is PATENTSCOPE?
- Search by keyword, number, inventor/company name
- Complex queries with predefined search fields
- Chemical information search
- Extend your queries by adding synonyms and translations
- IPC Statistics
- etc.

Patent (STM) Searching

- Main principles
{What (object),
why (goals),
where(databases),
whence (search formula),
whom}
+ Relevance (iterations)

Targets of Patent Searching

- Simple Patent Search (number, inventor, assigner, status)
- Patent Family Search
- Patentability / Novelty Search (Testing)
- Prior Art Search
- Infringement Search (including patent citations)
- State of Art Search
- Freedom to Operate Search

Elements of searching (searching Terms

- Keywords
 - Synonyms, Omonims, ...
 - Personal and Corporative Names
- Index terms, Subject Heading, Thesaurus Terms
- Classification Terms (IPC, CPC,...)
- Data Formats (YYYYMMDD, Patent Number, etc)

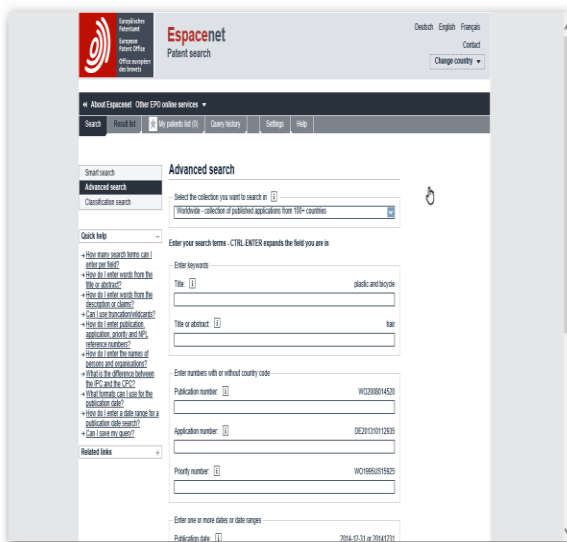
Search Formula (Searching Language)

- Logic (Boolean) Function (**AND, OR, NOT**) and logical algebra
- Wildcard (masking) operators
(***/? – many character, # - non/one, 1- one exactly**)
- Proximity Operators
(**N-words, Sentence, Paragraph**)
- Range Operators [20100101 TO 20100601]
- Inequality Operators (PubYear>2011)
- Field Selector
(**Title, Name, Source, Subject,...**)

- Example (Different Format and Symbols in Diff. DB):
 $T_1 (w3) (T_2/FS(a) \text{ And } (T_3 \text{ OR } T_4) \text{ and } (T_5^* \text{ or } T_6\#))$

Search Formula (examples)

- Search in Espacenet
 - *aspirin AND cardio**
- Search in CAplus
 - *Search ((e1-e6 and 189998-69-1/RN) AND ((L14 OR 79-09-1/RN) OR (L22 OR 9115-64-7/RN) OR (L19 OR 621-35-3/RN)) and patent/dt and wo/pc and prd>20151001 and (63? OR 1-6 OR 1-7)/CC*



- Search in SCOPUS
 - *(((TITLE-ABS-KEY (pid PRE/2 control*) OR INDEXTERMS (pid PRE/1 control*) OR INDEXTERMS (two-term PRE/1 control) OR INDEXTERMS (pi PRE/1 control*) OR INDEXTERMS (three-term AND pre/1control*)) AND (TITLE-ABS-KEY-AUTH (fractional PRE/1 order) OR TITLE-ABS-KEY-AUTH (noninteger PRE/1 order) OR TITLE-ABS-KEY-AUTH (fract* PRE/2 dynamic*) OR TITLE-ABS-KEY-AUTH (crone) OR INDEXTERMS (fractional PRE/2 order) OR INDEXTERMS (non-integer PRE/1 order) OR INDEXTERMS (fractional PRE/1 dynamic*) OR INDEXTERMS (fraction PRE/1 calculus)))) OR (TITLE-ABS-KEY (fopid))*

Search Results

- Reference Format (Field Structured) (TXT, HTML)

- Full text Format (PDF)

Bibliographic data: AU2016374872 (A1) — 2018-07-19

★ In my patents list Previous 1/500 ▶ Next Report data error Print

Substrate-electrode (SE) interface illuminated photoelectrodes and photoelectrochemical cells

Page bookmark [AU2016374872 \(A1\) - Substrate-electrode \(SE\) interface illuminated photoelectrodes and photoelectrochemical cells](#)

Inventor(s): PENELAS PÉREZ GERMÁN; HERNÁNDEZ ALONSO MARÍA DOLORES; ANDREU ARBELLA TERESA; MORANTE LEONART JUAN RAMÓN; ROS FIGUERAS CARLES; CARRETERO GONZÁLEZ NINA MAGALI; CALLE MARTIN ERIC; ORTEGA VILLASCLARAS PABLO; ALCUBILLA GONZALEZ RAMON ±

Applicant(s): REPSOL SA ±

Classification: - international: C25B1/00; C25B9/20; H01L31/068
- cooperative: C25B1/003; C25B9/20; H01L31/0682; Y02E10/547; Y02P20/135

Application number: AU20160374872 201611222

Priority number(s): EP20150382658 201511223 · WO2016EP82442 20161222

Also published as: CA3008988 (A1), EP3184870 (A1), WO2017109108 (A1).

Abstract of AU2016374872 (A1)

Translate this text into [patenttranslate](#) powered by EPO and Google

A photoelectrode for a photoelectrochemical cell is disclosed. The photoelectrode comprises a back-contact **scat. cell** comprising emitter and collector contacts being spaced apart by first openings. The emitter and collector contacts are respectively collected in an emitter busbar and a collector busbar. The photoelectrode further comprises a contact passivation layer to separate the emitter and collector contacts from the electrolyte when in use. The contact passivation layer further comprises second openings in correspondence with the first openings. The photoelectrode further comprises a resin layer covering the openings and a portion of the contact passivation layer such that in use only charge carriers from the emitter contacts traverse the contact passivation layer in its way to the electrolyte while charge carriers from the collector contacts are collected in the collector busbar. An electrocatalyst layer is further provided covering respectively the resin layer and/or the contact passivation layer.

FIG. 2A

공개특허 10-2018-0067782

(19) 대한민국특허청(KR)	(11) 공개번호 10-2018-0067782
(12) 공개특허공보(A)	(43) 공개일자 2018년06월21일

(51) 국제특허분류(Int. Cl.) H01L 31/068 (2006.01) H01L 31/0224 (2006.01) H01L 31/0236 (2006.01) H01L 31/0382 (2006.01)	(71) 출원인 오세아이 주식회사 서울특별시 중구 소공로 94 (소공동)
(52) CPC특허분류 H01L 31/0682 (2013.01) H01L 31/022425 (2013.01)	(72) 발명자 이승직 경기도 성남시 중원구 사기막로62번길 61 (상대원동, OCI중기연구소)
(21) 출원번호 10-2016-0168958	(74) 대리인 특허법인 대아
(22) 출원일자 2016년12월12일 심사청구일자 없음	

전체 청구항 수 : 총 10 항

(54) 발명의 명칭 후면접합 실리콘 태양전지 및 이를 제조하는 방법

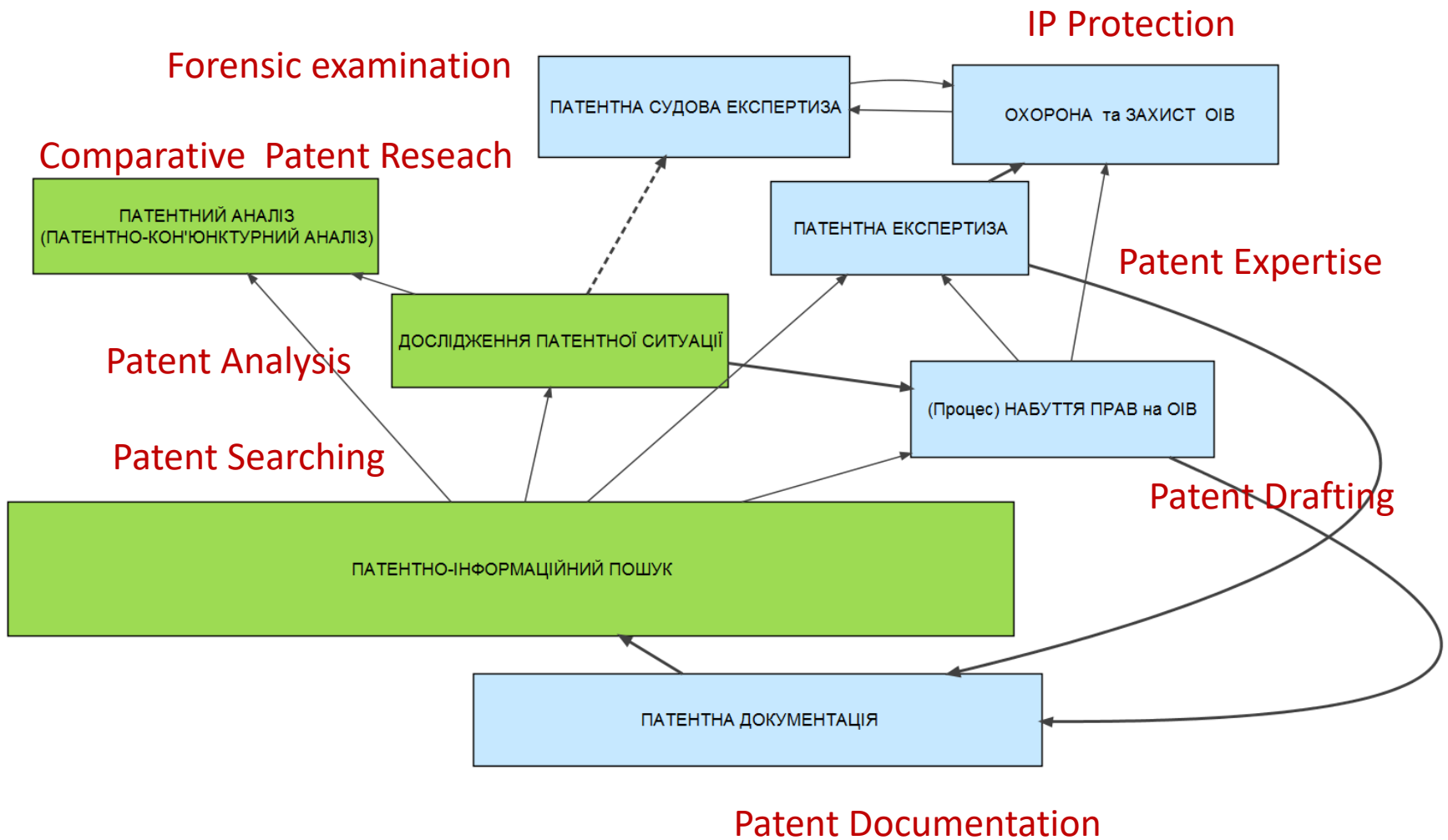
(57) 요약

실리콘 기판; 전면전계 영역; 후면전계 영역; 및 터널접합 영역;를 포함하고, 상기 전면전계 영역은 텍스처링 구조를 갖는 상기 실리콘 기판의 전면에 형성되고, 텍스처링 구조를 갖는 제1 도전성 반도체층을 포함하고, 상기 후면전계 영역과 상기 터널접합 영역은 상기 실리콘 기판의 후면에 교대로 배치되고, 상기 후면전계 영역과 접하는 상기 실리콘 기판의 후면은 텍스처링 구조를 갖고, 상기 후면전계 영역은 텍스처링 구조를 갖는 제2 도전성 반도체층 및 상기 제2 도전성 반도체층에 연결된 제1 전극을 포함하고, 상기 터널접합 영역은 상기 실리콘 기판의 후면으로부터 순차적으로 터널링층 및 에미터층; 및 상기 에미터층에 연결된 제2 전극을 포함하는 후면접합 실리콘 태양전지를 제공한다.

도 100 - 도 1

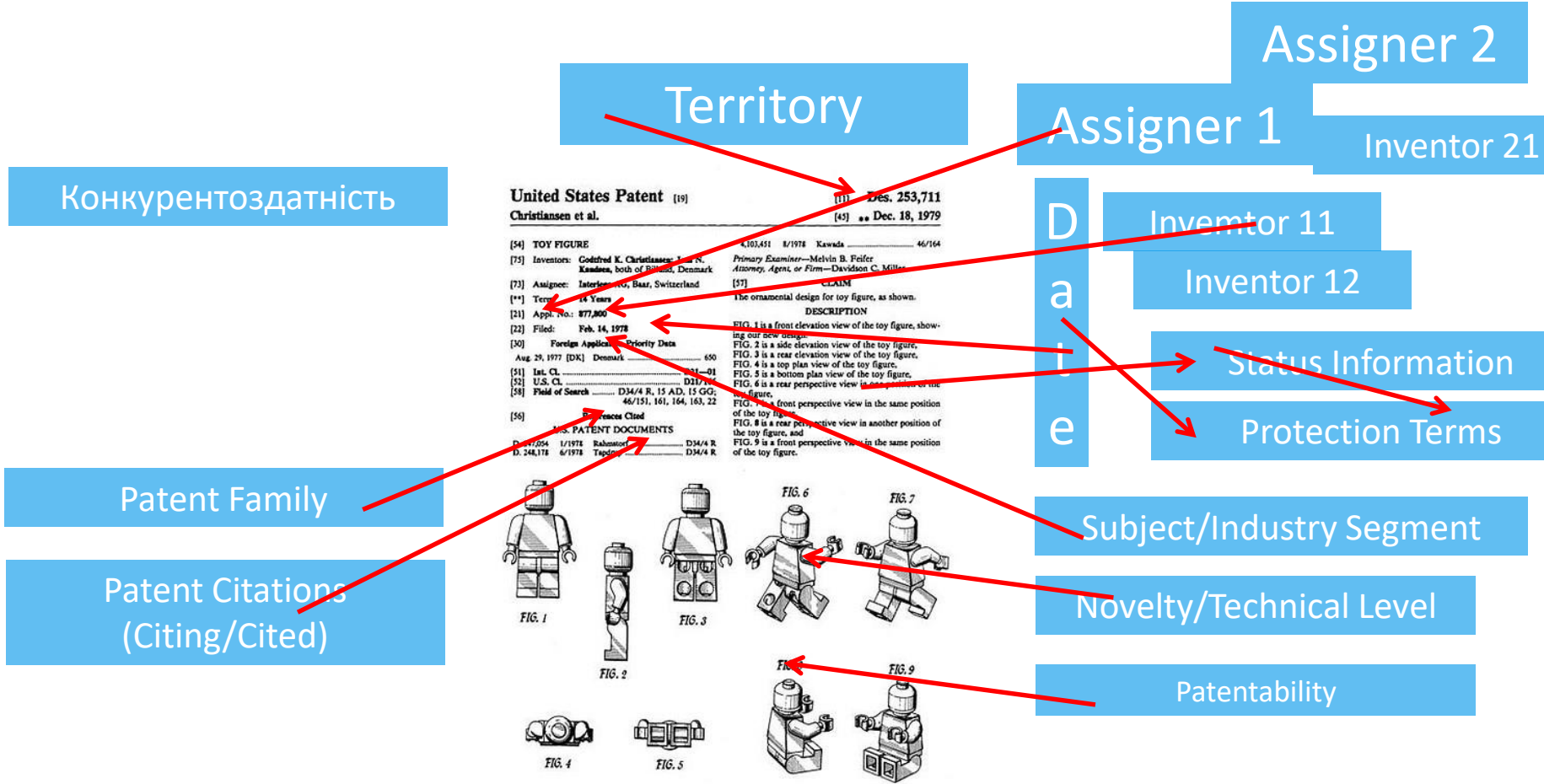
Patent Research (directions)

- Patent Drafting
- Patent Management
- Patent appraisal
- Innovation Management



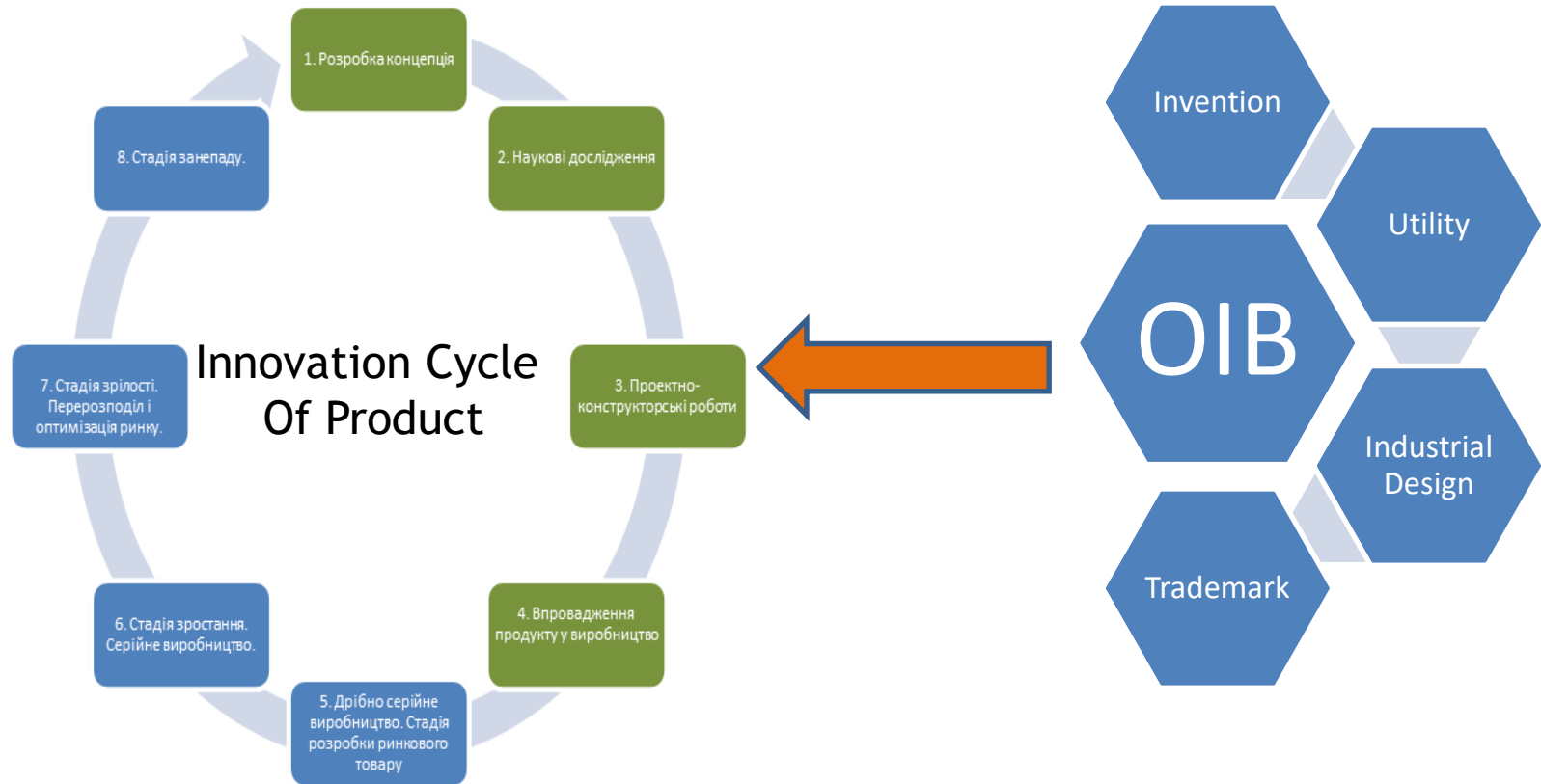
Patent Research – General Diagramm

Research: Patent Document as a source



Patent is like a snapshot of Intellectual Property Object Situation

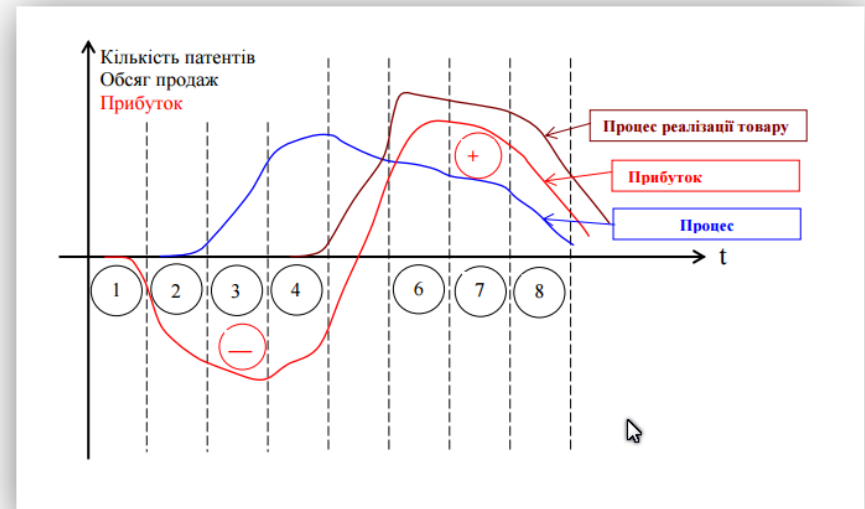
Intellectual Property and Innovation Product Cycle



Economical Analysis Conception (links to Patent appraisal)

1. Financial Process of a Research & Development (Expense/Profit)
2. Patent Process
3. Product Selling Process

“Number of Patents is corresponded with Expense/Profit”



Patent Research Goals (Main)

- Trends in Industry Development (Prognosis)
- Intellectual Security Management
- Intellectual Property Management Strategy
- Intellectual Property Marketing (Partner Searching, License Activity)

Additional research objectives (I)

- Information Support of a R&D Activity
- Information Support of an Innovation Activity
- Information Support of a Marketing Research
(Competitors identification, IP right violations, etc.)
- Information Support of an Appraisal Activity
(market appraisal method)

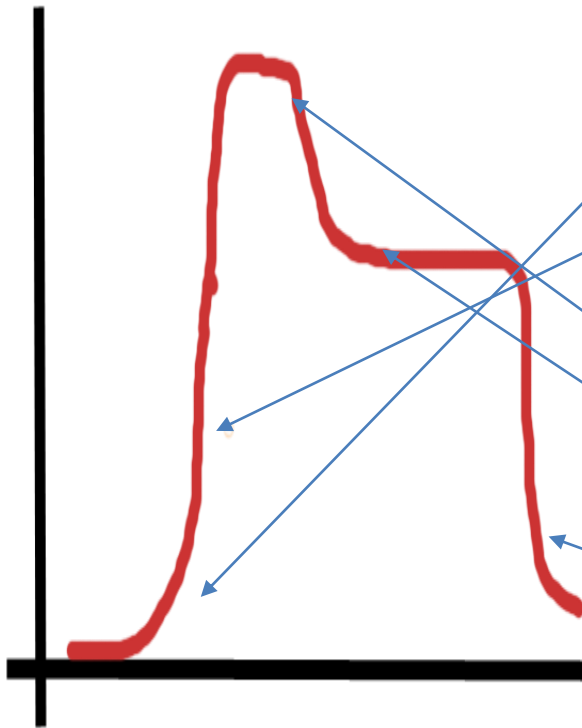
Additional research objectives (II)

- *Acquiring technical information from patents*
- *Using unprotected technologies*
- *Avoiding duplication in Research*
- *Major technologies trends estimation*
- *Technological policy and orientation of major companies*
- *Selection of suitable partners for strategic technology partnerships*
- *Identification of competitors*
- *Identification of innovators*
- *Avoidance of infringing competitors' patents*
- *Identification of potential licensors*
- *Tracing infringements*

Different type of Patent Research (Simple Cases)

- Novelty/ Patentability
- Patent and Subject Dynamics
- Freedom of Operations
- Inventors, Assigner, Licensor Identification

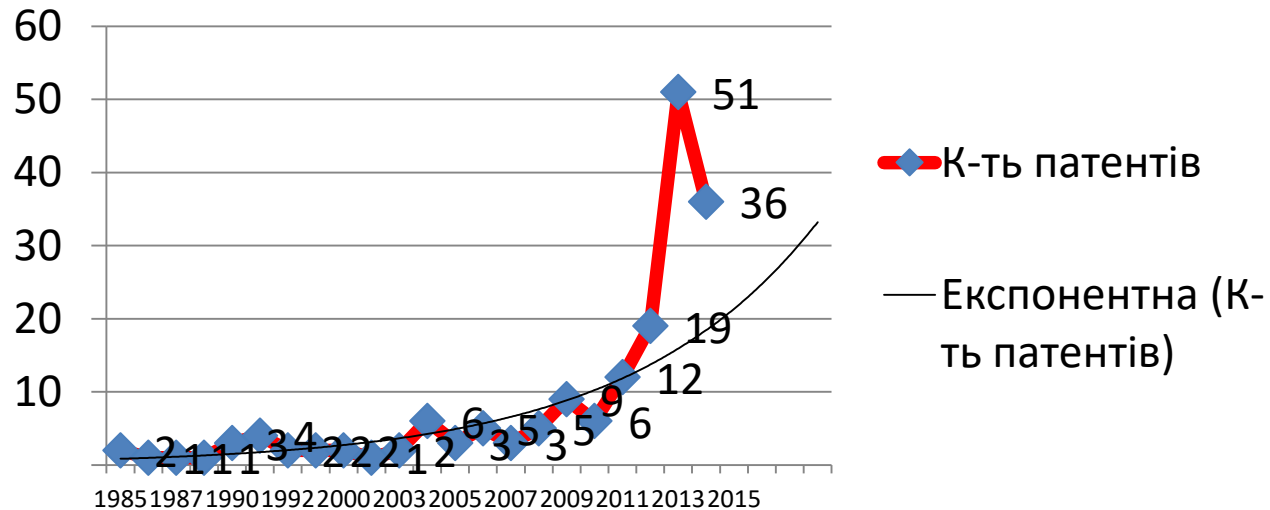
Innovation Dynamics – Prognosis Conception



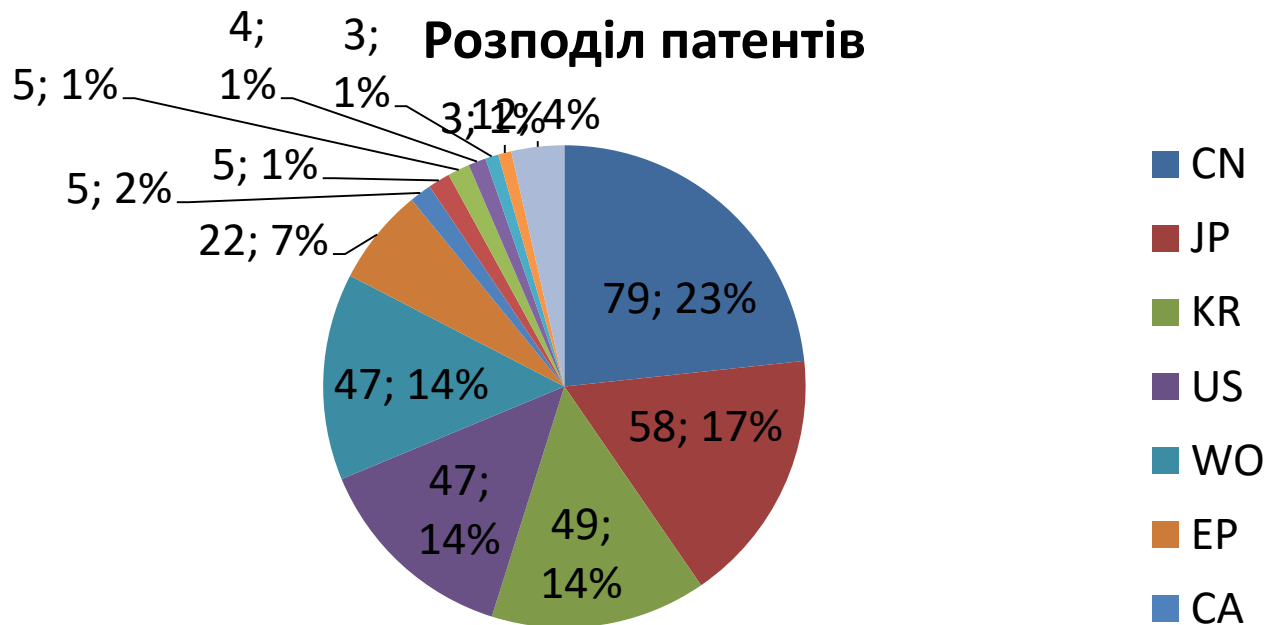
- Concept Research
- Successful Solution Development
- Apogee of development
- Period of perfection
- Decline in technical solution

Patent Analysis– 3-Year Prognosis

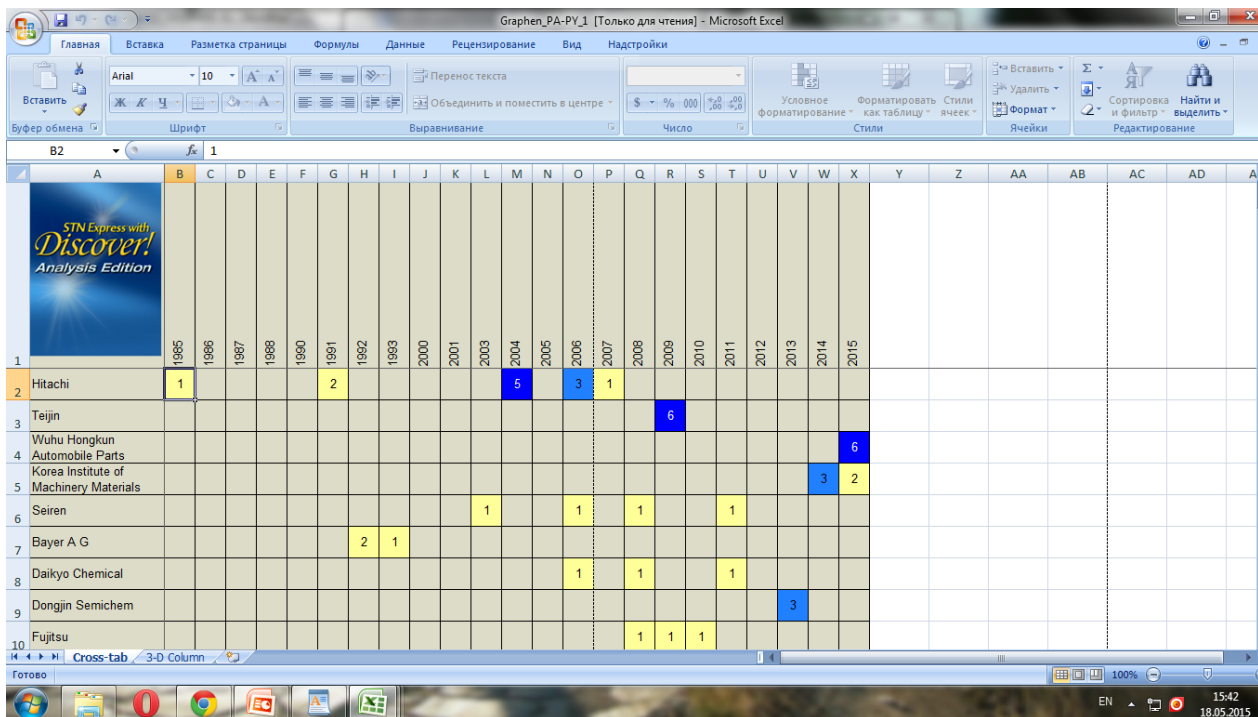
Number Patents by Year (exponent. Prognosis Model)



Patent Analysis by Patent Country



Patent Analysis– Patent Dynamics By Country



Patent Analysis by IPC

The screenshot shows a Microsoft Excel spreadsheet titled 'Graphen_IC4-PY_1 - Microsoft Excel'. The spreadsheet is a cross-tabulation of patent counts by IPC class (rows) and year (columns). The years range from 1985 to 2015. The IPC classes listed are H05k, C08k, C09l, C01b, B32b, H01b, C09d, B82y, and H01l. A red box highlights the H05K 9/00 class, and a red line points to the H05k row.

	1985	1986	1987	1988	1989	1992	1993	2000	2001	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
H05k			1	1	1	2		1	1	1	2	6	1	4	1	3	6	2	5	6	16	12	
C08k	1	1			1	1	1	2				3	2	1	2	1	5	1	3	3	14	14	4
C09l	1	1				1	1	1				3	2	1	1	1	5	1	2	3	12	12	4
C01b					2	2							1		1	1	4	4	3	3	13	5	3
B32b		1	1	1	1	3		1	1				1	2	2	2	1	3	4	5	9	1	
H01b	2			1	1	1	1	1	1						1		1	5	5	9	6	1	
C09d	1												1				1		3	13	3	10	
B82y															1			4	5	9	2		
H01l					1										2	4	2	3	1	4	2	1	

H05K 9/00 Екранування приладів чи елементів від електричних чи магнітних полів

Different type of Patent Research (Advanced Cases) (II)

- Technologies overview on the Product Market
- Players on the Product Market
- Company's Patent Portfolio Reconstruction
- Patent Mapping
- Patent Network (by object, by technology, by company) based on Citation Network
- Comparative analysis of companies on patenting policy

Derwent Innovation Index output

Output of analysis

Figure 10. Priority Country Information

Earliest Priority Country Code	Country or Authority Name	Inventions with no Granted Patent	Inventions with 17 Granted Patent	# Branches	% with patent	PCT Application Country Code	PCT Deposit Office	Count
US	United States	152	1102	276	87%	US	United States	420
EP	European Office	73	30	132	30%	EP	European Patent Office	100
GB	United Kingdom	32	174	48	30%	GB	Intellectual Property Office	45
JP	Japan	14	8	23	30%	JP	Japan Patent Office	30
DE	Germany	7	9	13	42%	DE	German Patent Office	16
FR	France	12	1	13	7%	FR	INPI	16
SE	Sweden	14	2	12	47%	SE	Swedish Patent Office	14
WO	PCT	8	3	13	23%	WO	World Intellectual Property Organization	4
DK	Denmark	10	1	11	8%	DK	Danish Patent Office	4
Other	13 Countries	30	10	38	33%			33
ALL		313	487	1300	20%			590

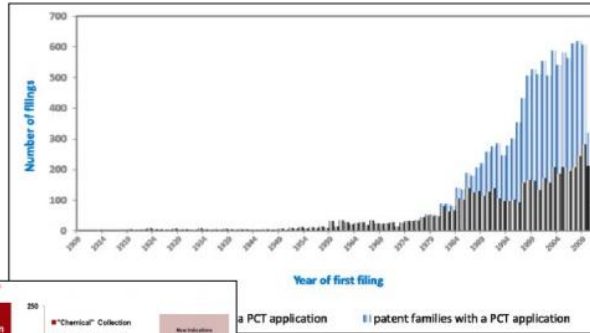
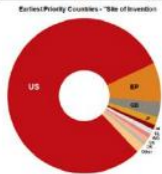
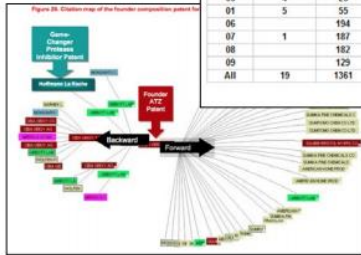
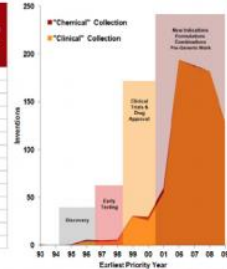


Figure 13. Invention Timelines vs Developmental Stages

Earliest Priority Year	"Chemical" Collection	"Clinical" Collection	Invention Families
93	1		1
94	1		1
95	2	4	6
96	1	4	5
97	1	5	6
98	1	30	31
99	4	26	30
01	5	55	60
06		194	194
07	1	187	188
08		182	182
09		129	129
All	19	1361	1380

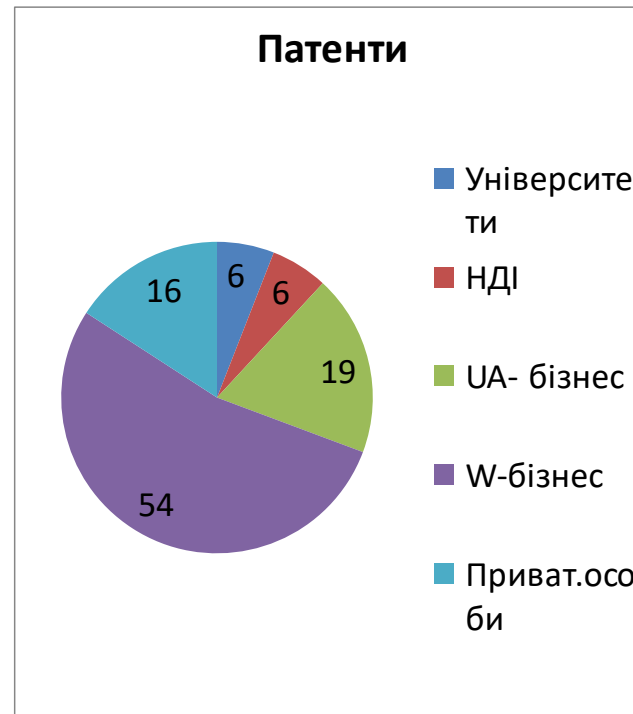
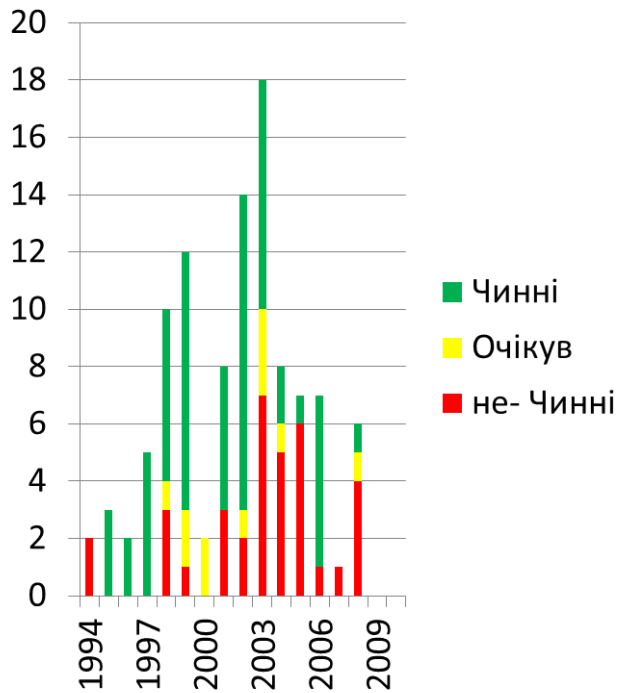


Database Selection Problems in Patent Analysis

	Global Patent Reference Center	ESPACENET	Patentscope	Global Patent Index	INPADOC (STN)	DWPI (STN)	Derwent Innovation Index
Geograph. Coverage	90	90	45	90	90	47	47
DB Size (records)	79 млн	79 млн	43 млн.+ 2.5 млн PCT	79 млн	79 млн	32.7 млн	32.7 млн
Time Coverage	1790	1790	197x **	1790	1790	1963	1963
Number of Inform. Fields	15	10	57	60	60	>50	18
IPC searching		+	+	+	+	+	+
Extend. Bibliography	-	-	+	+	+	+	+
Comand Line Language	+	-	+	+	-	-	-
Full text Searching	+	-	-	+	-	-	-
Searching Sequencing	+	-	+	+	+	+	+
Фиксац. Резулът	+	(+)	-	+	+	+	+
Analysis	-	(+)	+	+	+	+	+

PATENT RESEARCH EXAMPLES

Insuline market in Ukraine (169 Patents in Ukraine– 35 Acting Status)



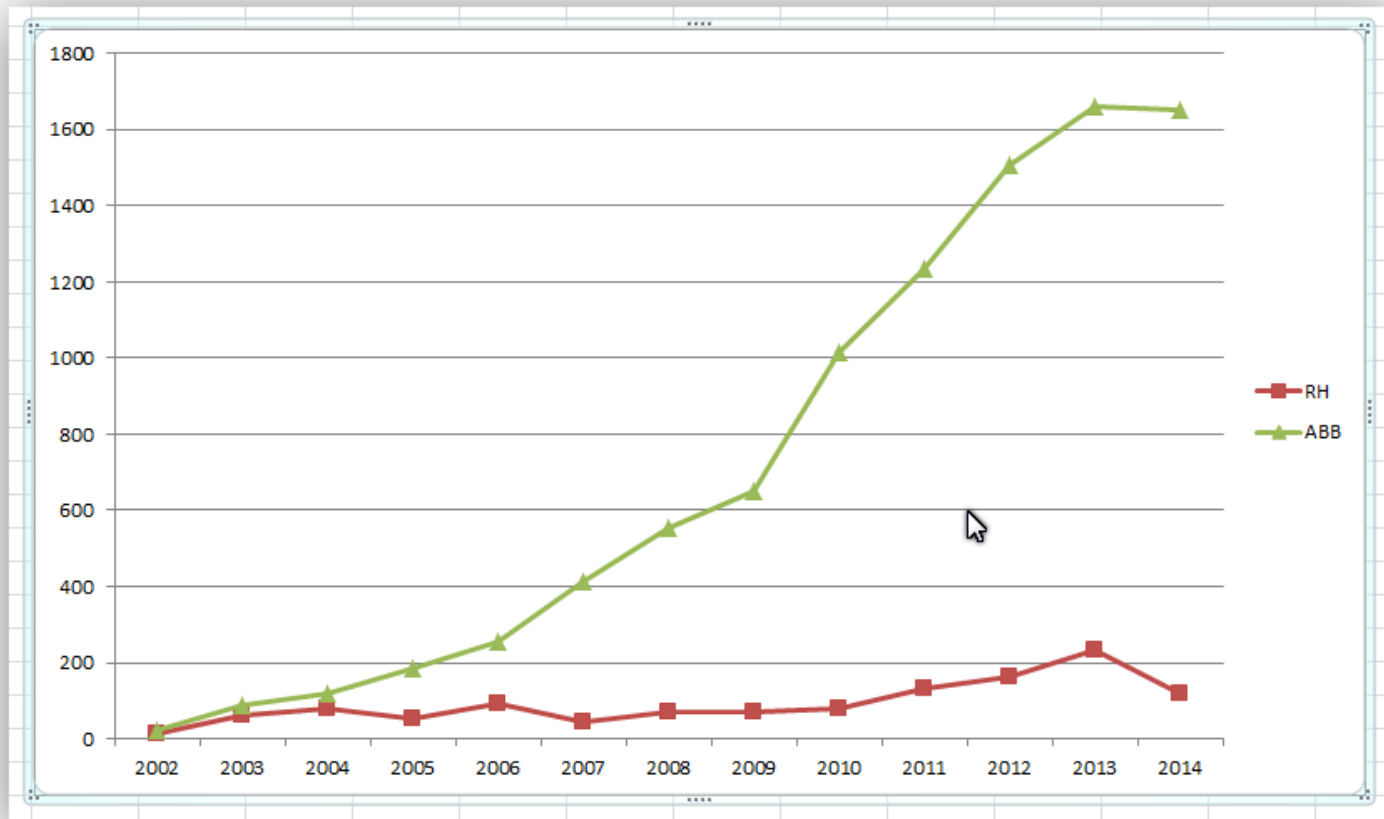
1. Universities
2. Reserch & Development Institutes
3. Ukrainian Business
4. Foreign Business
5. "Private Inventions"

Comparative analysis of companies on patenting policy

- ABB TECHNOLOGY AG
- MASCHINENFABRIK REINHAUSEN GMBH

Ukrainian Market: Electrical Transformer

Comparative analysis: Patent Dynamics



MASCHINENFABRIK REINHAUSEN GMBH - Cross-country patent Activity

PRC	FC															
	AP	AR	AT	AU	BR	CA	CH	CN	CO	CZ	DE	DK	EA	EG	EP	
AR	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	
AT	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
AU	0	0	0	3	0	0	0	2	0	0	0	0	0	0	1	
BR	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	
CH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CN	0	0	0	0	1	0	0	199	0	0	0	0	0	0	1	
CZ	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	
DE	1	0	17	11	6	11	1	206	0	376	6	0	0	0	137	
EM	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	
EP	0	3	105	38	45	62	0	489	1	90	6	0	3	950	0	
FI	0	0	4	2	1	0	0	2	0	9	0	0	0	0	18	
GB	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
HR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
IN	0	0	0	0	0	0	0	17	0	0	0	0	0	0	16	
IT	0	0	0	0	0	0	0	2	0	1	0	0	0	0	3	
JP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
KR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NO	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	
NZ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PL	0	0	2	0	0	0	0	0	2	0	0	0	0	0	8	
RU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SE	0	1	8	3	17	7	0	40	0	11	2	1	0	0	37	
US	0	0	14	18	39	79	1	133	1	23	1	0	0	0	128	
WO	2	7	53	89	80	193	0	666	0	99	11	2	3	626	0	
XH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ZA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

FC	FC									
	HU	IL	IT	JP	KR	MX	MY	NL	NO	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	1	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	1	0	1	45	7	0	0	0	8	
0	0	0	0	0	0	0	0	0	0	
0	0	1	56	132	16	1	0	0	7	
1	0	0	0	1	0	0	0	0	4	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	1	0	0	0	0	
0	0	3	0	0	0	0	0	0	0	
0	0	0	2	0	0	0	0	0	0	
0	0	0	0	6	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	
0	0	3	1	20	26	0	1	1	1	
0	3	0	127	62	0	0	0	18	0	
0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	

Priority Country= 24

Patent Country= 41

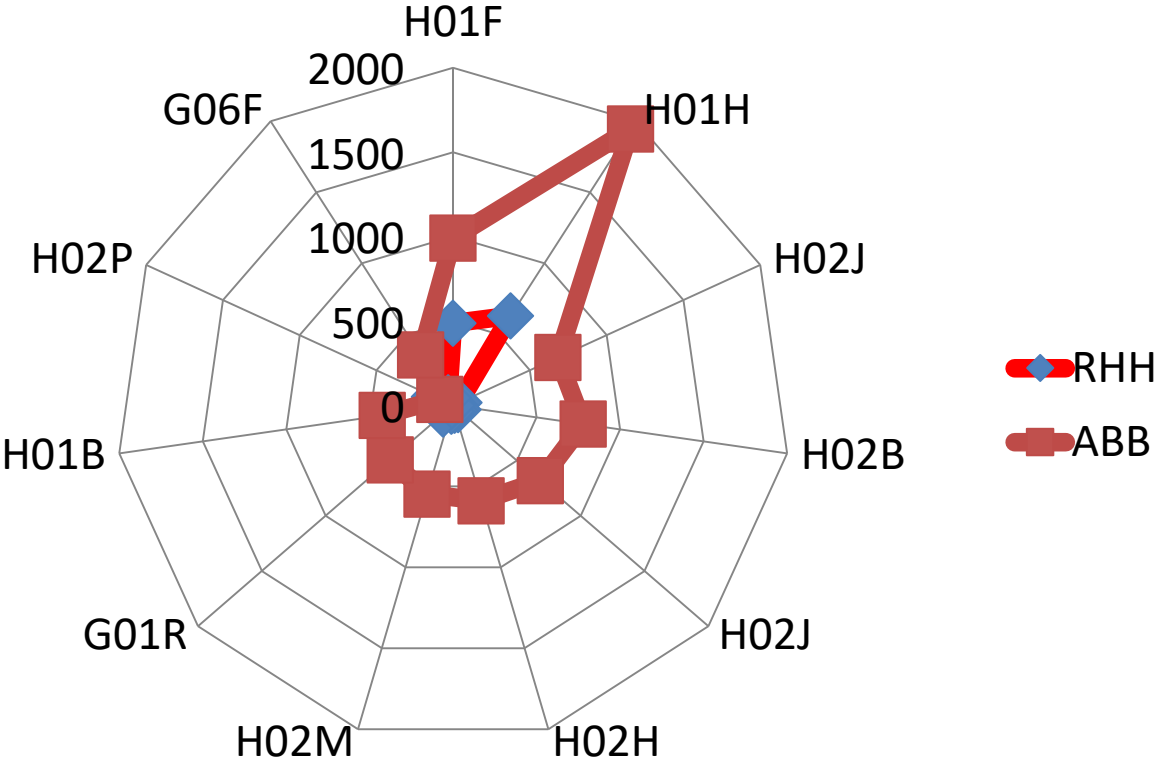
Ukrainian Patents= 16

Patents in Russian Federation= 104

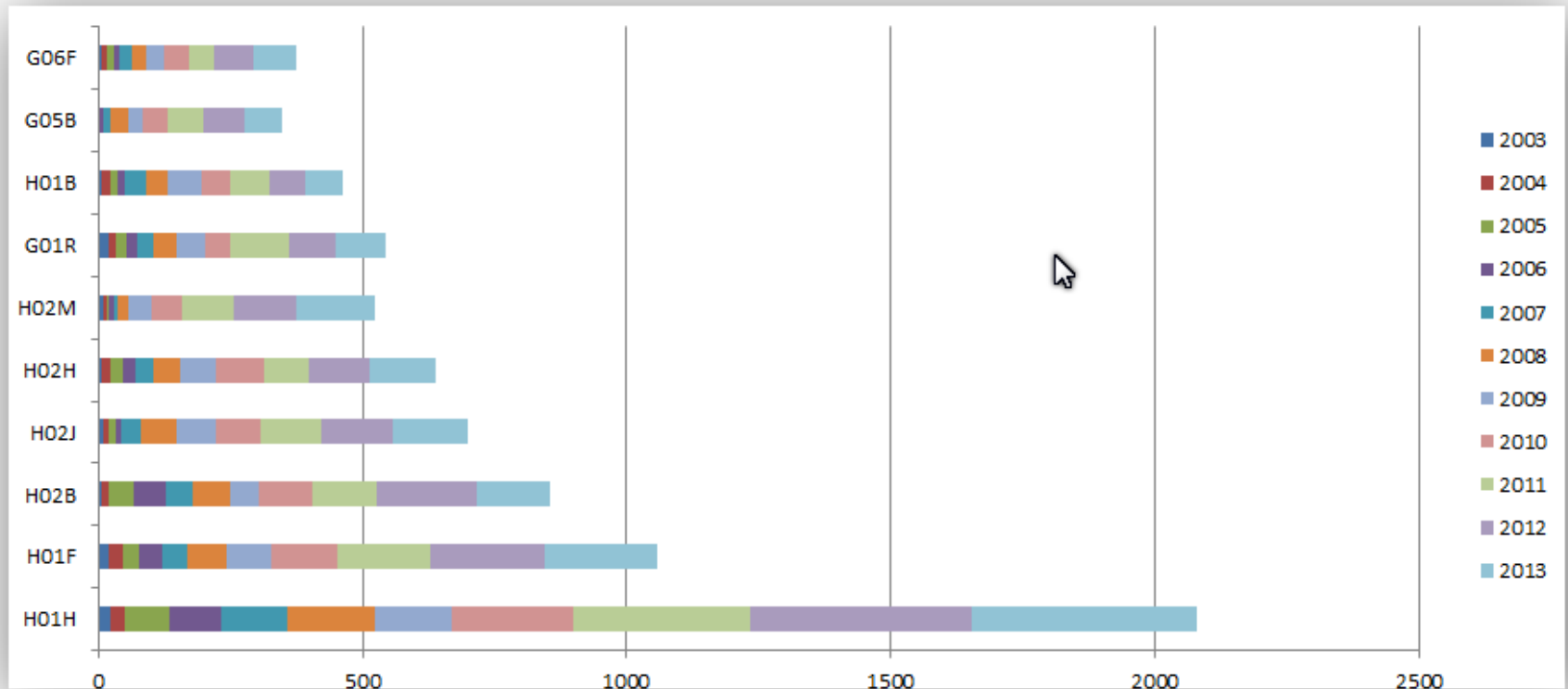
Main Country – R&D Resources = DE, CN

Країни пріоритету (розробка) = 24

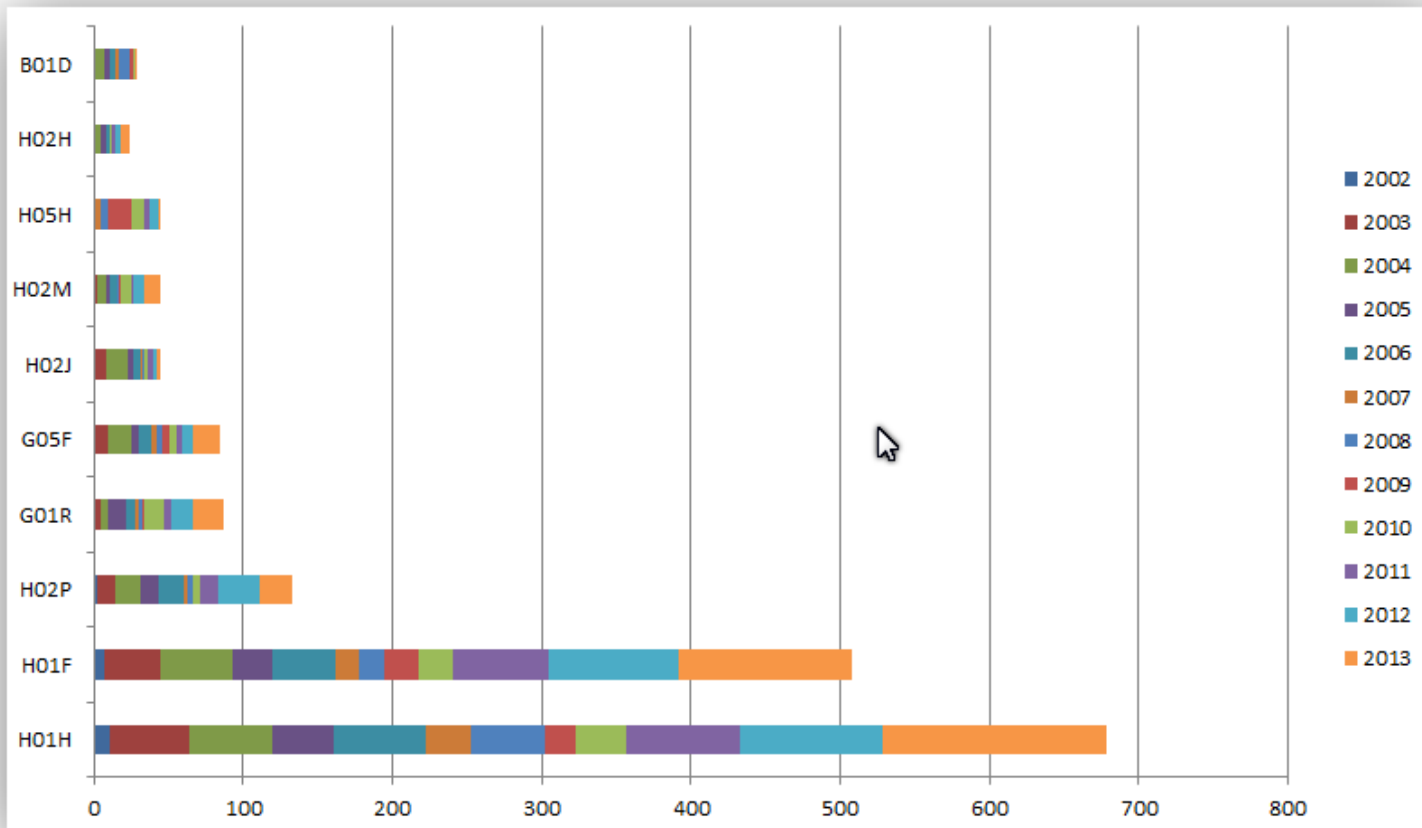
Comparative analysis: Subject Patent Profile



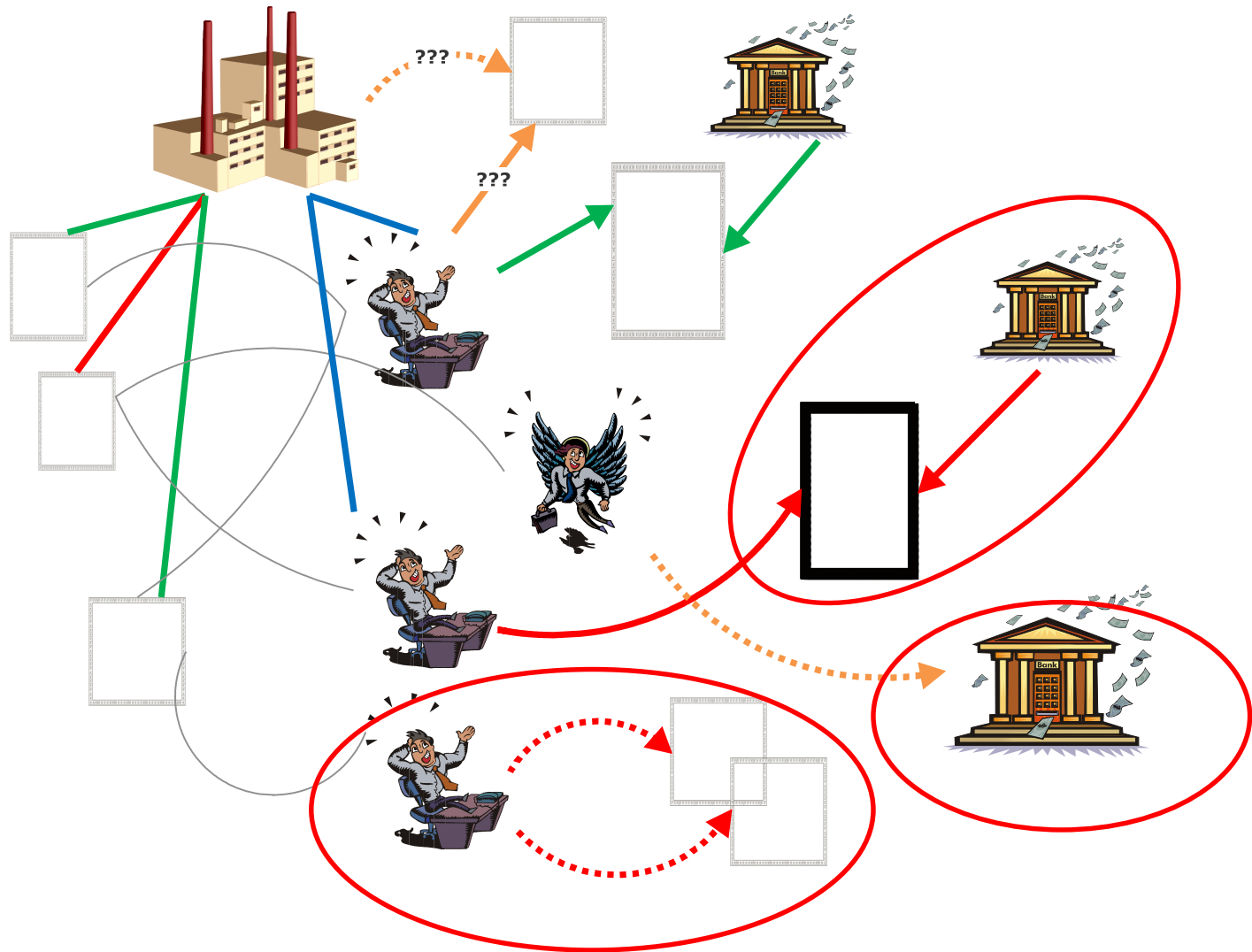
Comparative analysis: Subject Priority Dynamics - ABB



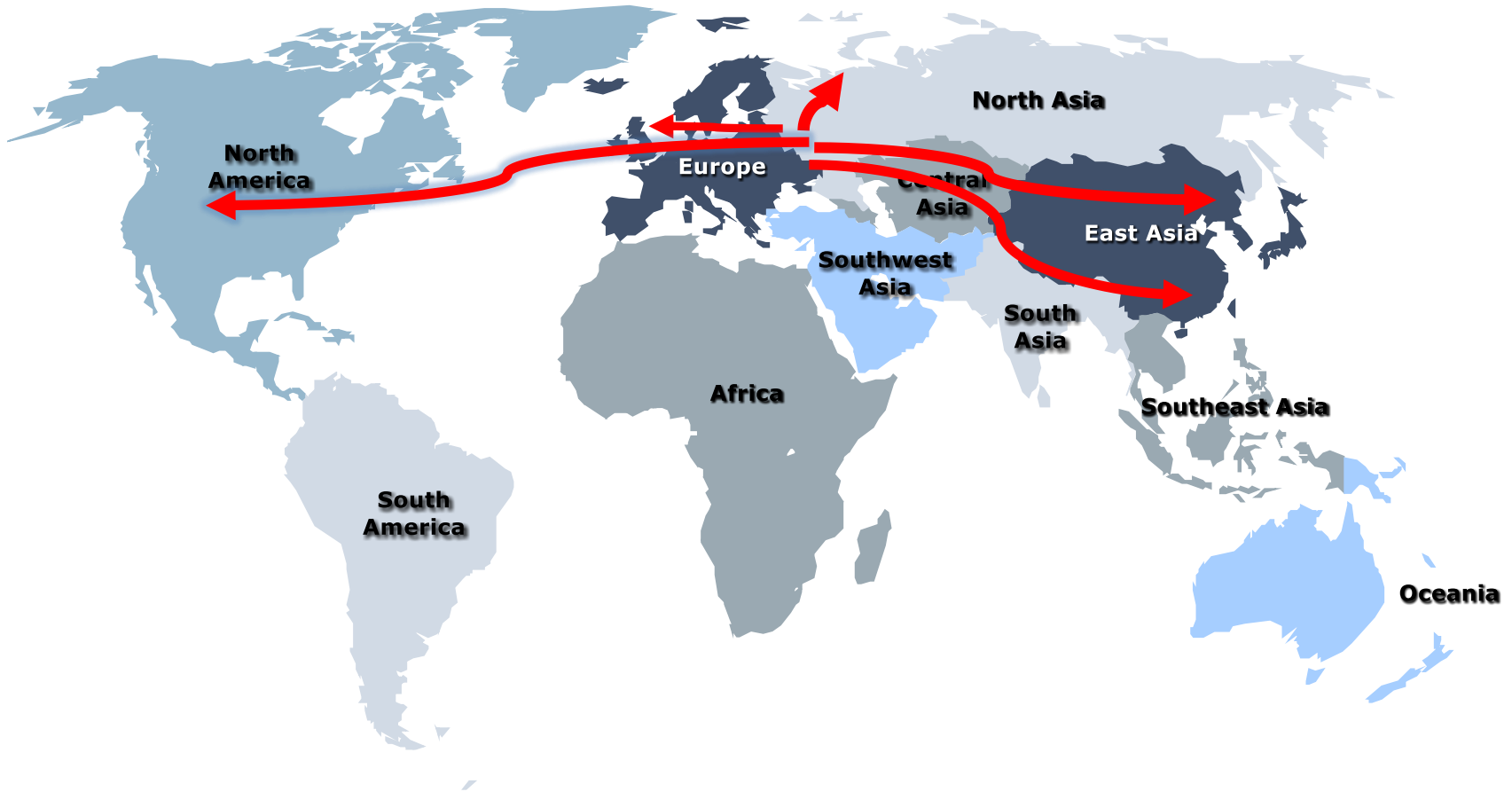
Comparative analysis: Subject Priority Dynamics - RH



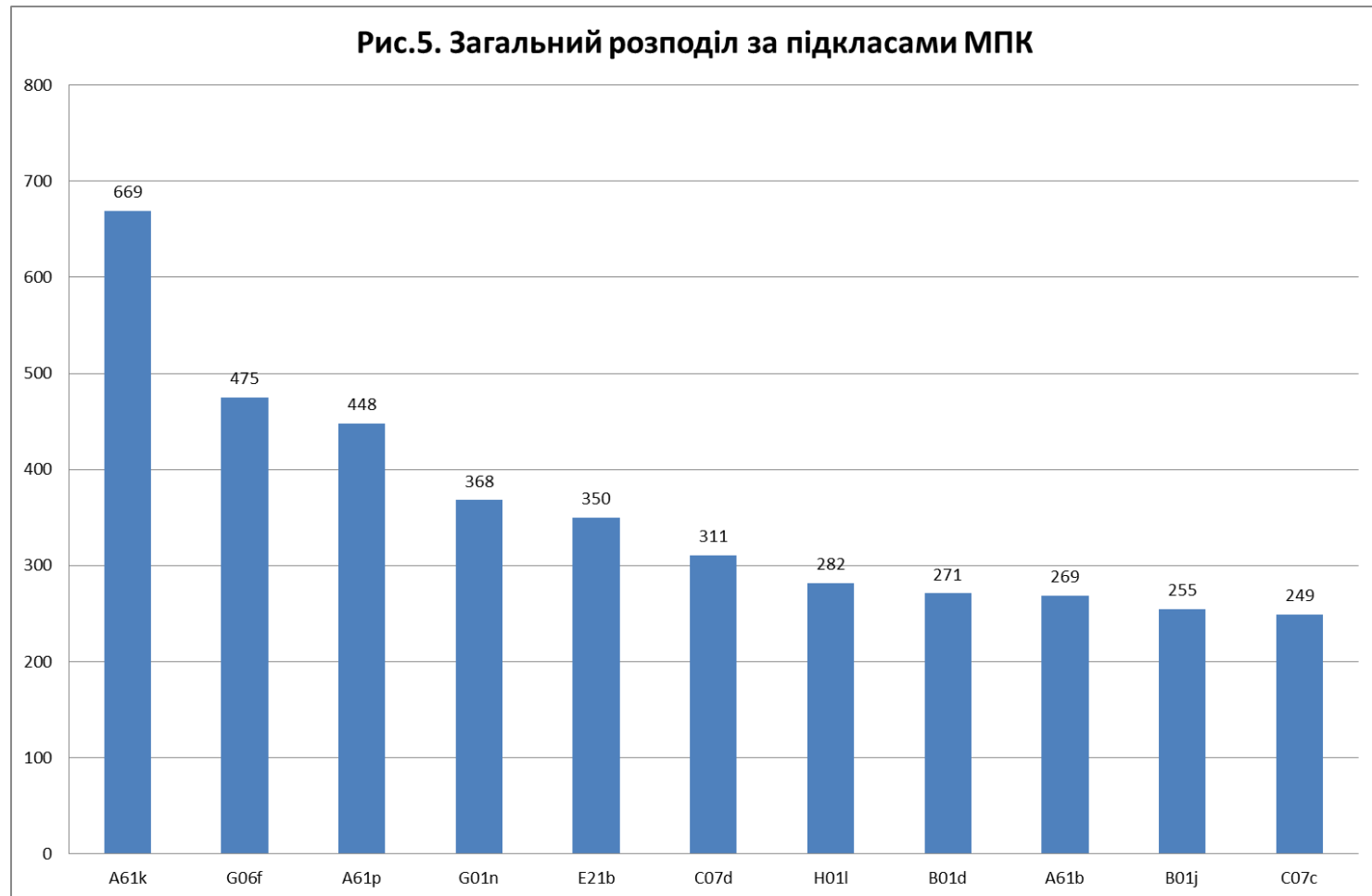
Security management on Intellectual Property



Security management on Intellectual Property – Ukraine Example

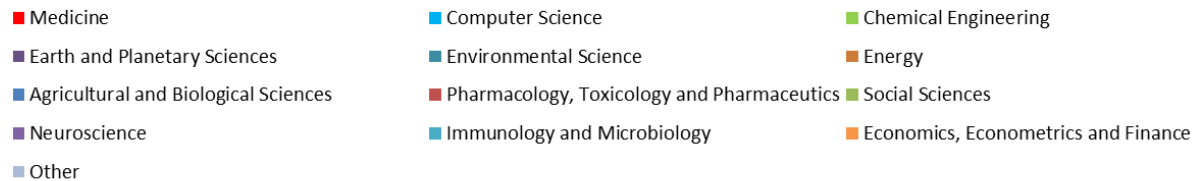


Distribution on the subject of inventions (IPC Classification)



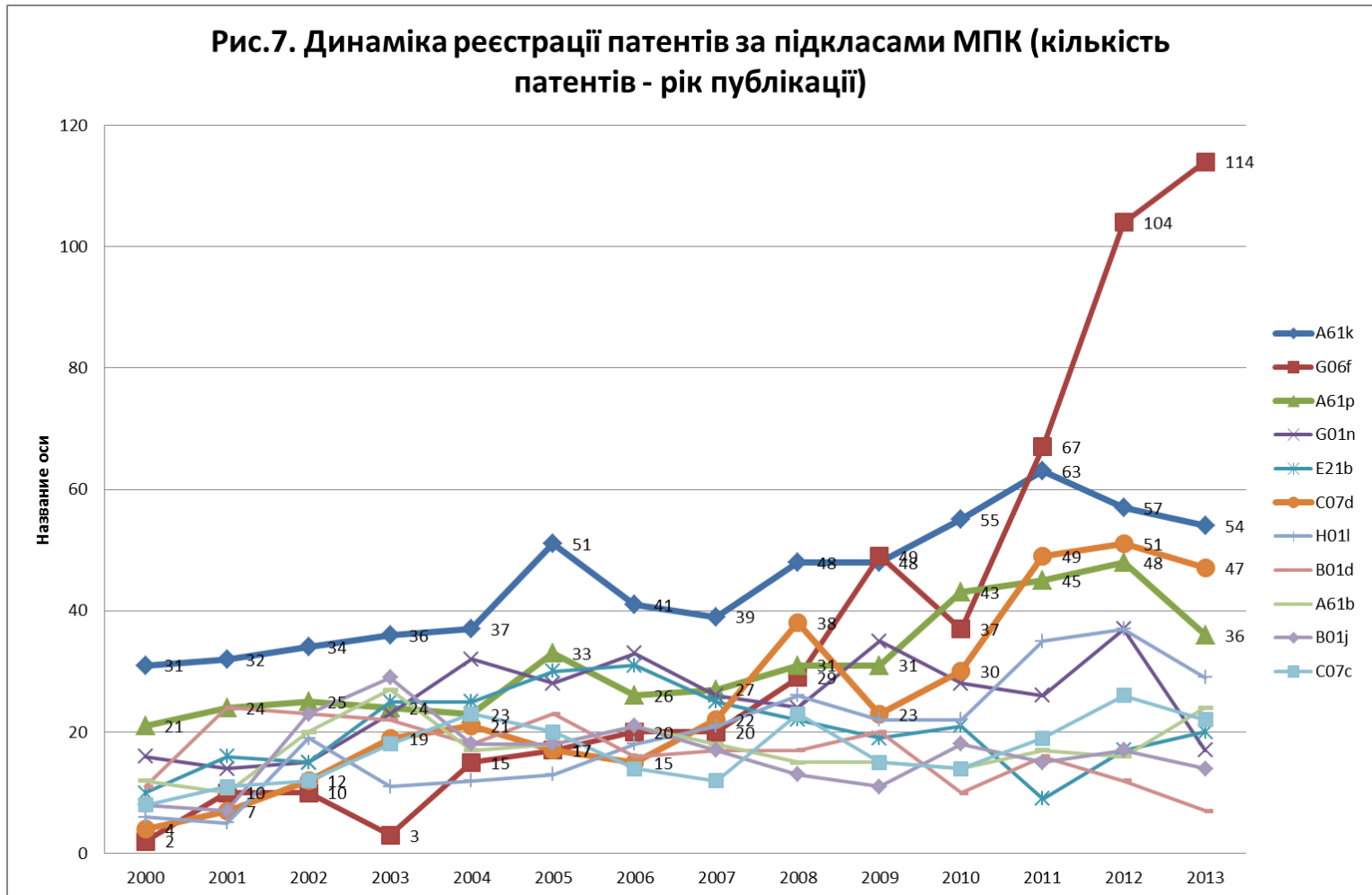
Distribution on the subject of inventions (Subject Headings)

Рис. 6. Розподіл публікацій за предметними розділами



IPC Dynamics

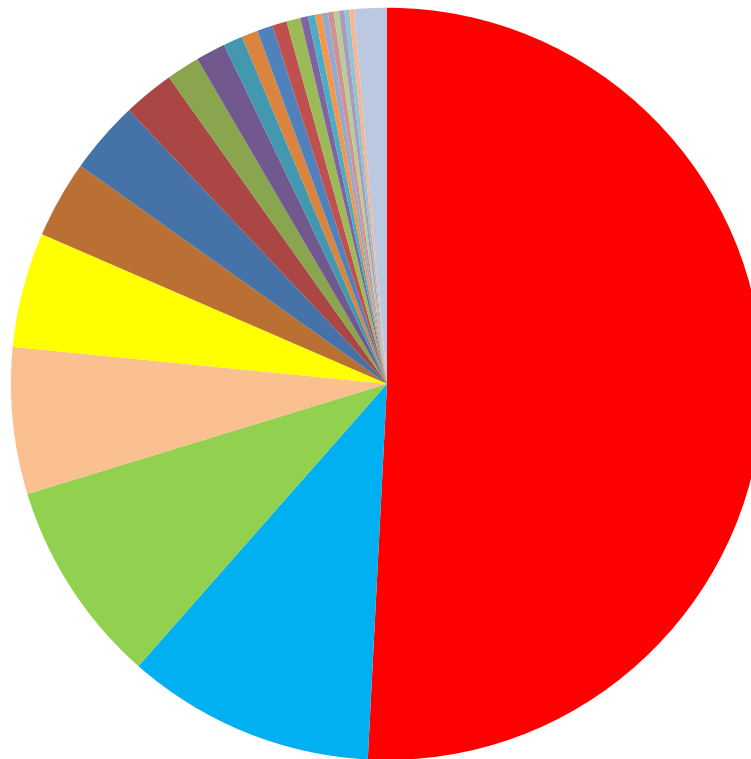
Рис.7. Динаміка реєстрації патентів за підкласами МПК (кількість патентів - рік публікації)



Patent Country Distribution

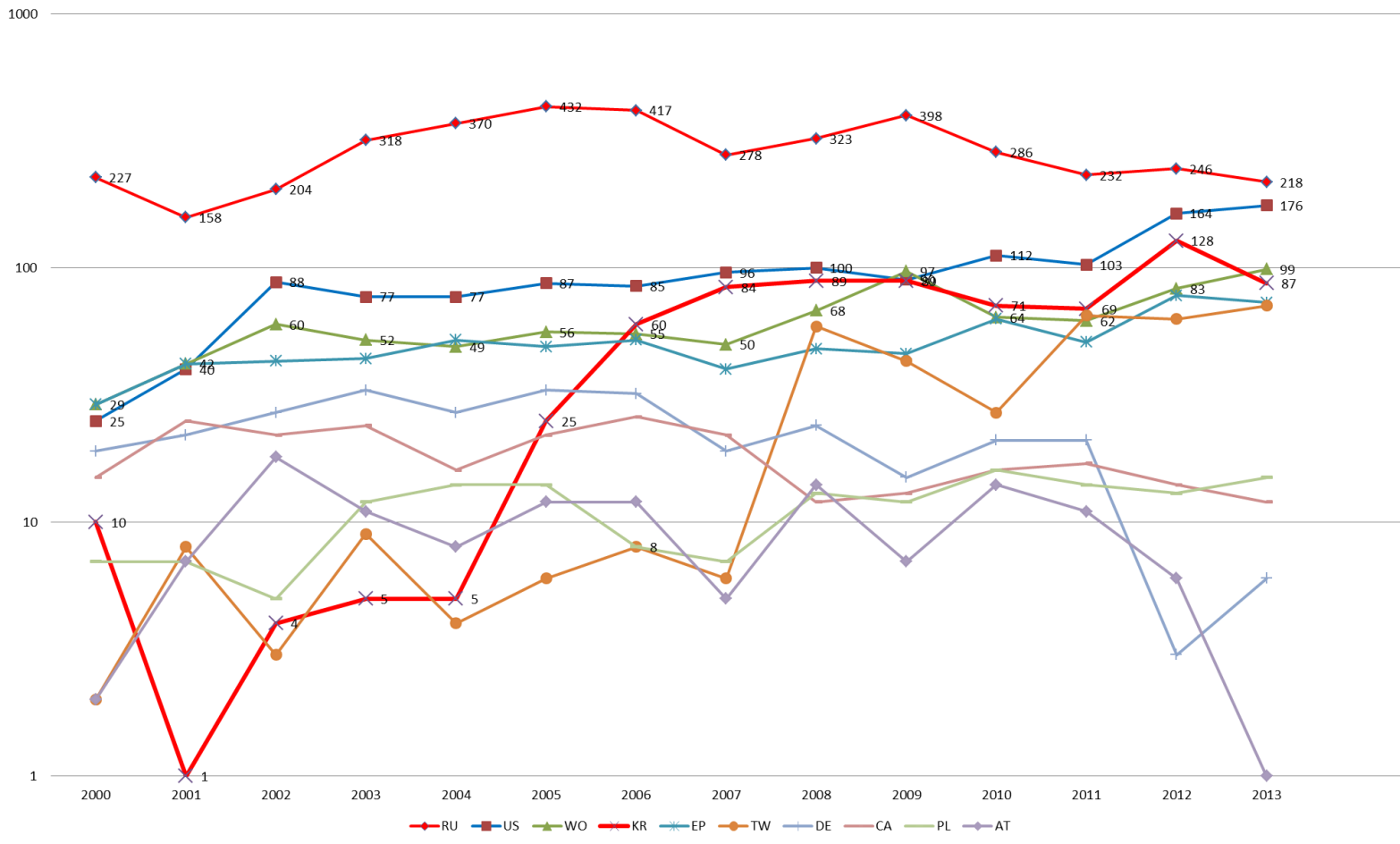
Рис.3. Розподіл патентів за країною реєстрації (кількість, відсоток %)

■ RU ■ US ■ WO ■ KR ■ EP ■ TW ■ DE ■ CA ■ PL ■ AT ■ ES ■ EA ■ UA ■ CZ ■ MD ■ GB ■ DK ■ SK ■ CN ■ NO ■ HU ■ LT ■ BG ■ FI ■ Other



Patent Dynamics by Patent Country

Рис.4. Динаміка патентування у різних країнах (кількість патентів- логарифмічний масштаб - роки публікації)



Information for further reading

- STN International –
<http://www.stn-international.com>
 - Broshures and Presentations
 - STN Content (200 DB descriptions)
 - Training Center-User Documentation
- Clarivate Analytics –
 - <https://clarivate.com/training-category/patent-research-intelligence-and-services/>
- IFI Claims - <https://ificlaims.com>
- Journal “Intellectual Property in Ukraine” (2013-2018)

Presentation can be download under Creative Commons Licence CC-BY

[HTTP://DOI.ORG/10.5281/ZENODO.XXXXX](http://DOI.ORG/10.5281/ZENODO.XXXXX)

Thank you!

Oleksii Vasyliev

Ph.D., Patent Attorney,
FRACSIM-IMM, Kyiv, Ukraine
oleksii.vasyliev@gmail.com