

CWS/ATR/PI/2019/UA

Annual Technical Report on Patent Information Activities in 2019 submitted by **MINISTRY FOR DEVELOPMENT OF ECONOMY, TRADE AND AGRICULTURE OF UKRAINE***

*According to the Resolution of the Cabinet of Ministers of Ukraine of September 2, 2019 829 "Some Issues of Optimizing the System of Central Executive Bodies", in order to optimize the system of central executive bodies and in accordance with paragraphs 9 and 9-1 of Article 116 of the Constitution of Ukraine, the Ministry of Economic Development and Trade of Ukraine was renamed as the Ministry for Development of Economy, Trade and Agriculture of Ukraine.

I. GENERAL OVERVIEW OF RECENT DEVELOPMENTS IN PATENT INFORMATION ACTIVITIES CARRIED OUT BY THE OFFICE

Outline of main policies and plans aimed at development of patent information activities and expected time frames for their realization

The main document determining the directions for the development of patent information activities in 2019 was the Plan of Activities of the State Enterprise "Ukrainian Intellectual Property Institute" (Ukrpatent) which contained strategic directions "Patent information support in the intellectual property sphere and provision of wide public with access to the information related to intellectual property rights acquisition" and "Implementation of the modern information technology", which in particular envisage:

- comprehensive development of the main directions of information support in the intellectual property sphere;
- improvement of information support of the procedure of examination for industrial property (IP) rights applications with regard to forming the electronic information resources of Ukrpatent for examination purposes, providing access to the foreign commercial databases which contain PCT Minimum Documentation;
- implementation of the new version of the International Patent Classification in translation into Ukrainian, creating an information and reference system freely accessible to the public via the website of Ukrpatent;
- unification of the patent documentation international exchange procedure carried out with the purpose of acquisition of patent collections of the state system of intellectual property legal protection, with due account of the trends of transition of the intellectual property offices in many countries to the presentation of patent information over the Internet only;
- implementation of series of actions aimed at ensuring the continued free-of-charge acquisition of patent information resources of Ukraine with the national patent documentation on electronic carriers;
- unification and harmonization of the patent documentation of Ukraine with due account of the world experience and in accordance with the international standards of the World Intellectual Property Organization (WIPO) and the current legislation of Ukraine;
- automation of applications processing and IP rights protection documents management, namely, development of the technological automated systems on pending applications and IP rights protection documents, automation of document flow and provision of complex electronic information processing;
- development and implementation of freely accessible information resources for a wide range of public;
- development of IT infrastructure.
- improving the information infrastructure security level.

New projects launched or resumed this year in the context of the policies and plans mentioned above, short description: aims, partners, tasks

According to the planned tasks, the following projects were started in 2019:

1. Creation of the Online Customer Account for Services provided by Ukrpatent (OCAS).

The following functionality was implemented in the OCAS:

- placement of orders and payment for services through the Internet;
- transfer of orders from a personal account to Ukrpatent specialists;
- distribution of tasks for the provision of services between the relevant units for execution;
- receiving reporting materials from responsible specialists;
- keeping record of provided services;
- correspondence with customers of services via the Internet in order to simplify and increase efficiency of the procedures related to the acquisition and protection of IP rights.

Development of the OCAS software packages was completed at the end of 2019.

2. Creation of the specialized information system to provide access to the relevant data related to pendency of applications and maintenance of the state registers of IP rights titles of protection .

The Special Information System of Ukrpatent (SIS) ensures Internet access to information on any IP right in the close-to-real-time mode. The system search tool which has a general purpose search interface provides open and authorized access (with the use of a qualified electronic signature) to any document of the electronic dossier of an IP right. The SIS has two search engines – a simple and an advanced one. There is a simplified search form for the simple search. The advanced search has additional range of search tools which allows restricting the search by the type of IP right and by legal status. According to the selected type and legal status, it is possible to select any search parameter for the search.

Development of the SIS software packages was completed in 2019.

3. The project on creation of the automated system for the Systemic Means of Creation and Use of the Information Registers of the Ukrpatent information system objects (SMCUIR).

The set of functions for maintenance and use of the classifiers and registers have been implemented within the framework of the development of this project, which provides unambiguous classification and record of objects in the Ukrpatent information system environment, creation of services for the use and identification of the Ukrpatent information system objects, creation of tools for the Ukrpatent organizational structure management, providing access to the system-wide classifications of any Ukrpatent information system components.

Development of the SMCUIR software packages is planned to be completed in 2020.

Implementation of the following projects was in progress:

1. The activities were in progress to improve the General Document Management Automated System (GDMAS) in accordance with the new regulations and in order to expand the service functions, which started in 2018.

Results of the work on improvement and refinement of the GDMAS in 2019 are the following:

- increase of the speed of access to document files;
- simplification of the DB administration;
- capability to store files of very large-size documents in the database (> 2 GB);
- reduction of time for procedures related to search of electronic documents in the collection;
- increase in productivity of mass technological operations (formation of object dossiers);
- increase of the convenience of use and simplification of information perceiving (new search tools);
- increase in productivity of the GDMAS, improvement of its ergonomics.

Works on the GDMAS improvement and refinement were completed in 2019.

2. Creation of the Specialized Information and Retrieval System (SIRS) to ensure unified access of Ukrpatent examiners to certain internal and external information sources.

The integration of the electronic patent documents (collections) sources into the information repository to ensure highly efficient patent information searches by Ukrpatent examiners during examination of applications for inventions and/or utility models was performed as a part of creation of the SIRS. The SIRS repository is made with due consideration of searches in large data sets, the volume of which reaches tens of millions of documents.

Storage of files in the repository is organized by the country of origin.

The structure of file repositories should be optimized for fast file retrieval.

3. Reengineering of the storage, retrieval and data processing.

As a part of the project, the following tasks were performed:

- restructuring of the database and server software;
- making changes to the program code of the client parts of Ukrpatent technological systems;
- development and description of the information base model;
- development of means for monitoring, control and response to the implementation of regulatory procedures of the storage, retrieval and data processing system.

Results of the project implementation are the following:

- increase in productivity of Ukrpatent technological systems;
- expansion of functional capabilities of Ukrpatent technological systems;
- increase in objectivity of the quality estimation processes for examination of applications.

Main areas of patent information activities and related information and communication technology (ICT) practices which were in the focus of attention last year

The main types of patent information activities in the field of inventions (utility models) include information support of examination of applications for inventions (utility models), including creation of search databases for internal use in the examination body, publication of official information about applications and granted patents in the bulletin, operation support of the existing interactive databases and information and reference systems and creation of new ones for information servicing of a wide range of users via the Internet. Information on inventions (utility models) is also published on optical carriers.

Applications for inventions (utility models) are processed by means of the Inventions AS which has full functionality of text processing and record keeping at all stages, from application filing to completing examination and maintenance of the State Register of Patents of Ukraine for Inventions and the State Register of Patents of Ukraine for Utility Models.

An automated workplace of the Editorial Department is used to form the information arrays which are included to the Bulletin "Industrial Property".

The practical application of information and communication technologies ensured the improvement of patent information activities efficiency, in particular in the following areas:

- carrying out scientific and technical examination of applications;
- technical administration of the State Register of Patents for Inventions and Utility Models;
- carrying out patent information searches;
- providing a range of patent information services to the wide public.

In 2019, measures were taken to update computer and telecommunications equipment, software as well as hardware and software security. In particular, LAN switches were put into operation in 2019. The switches are designed to replace the core of the Ukrpatent local network to increase its capacity and bandwidth to 40 Gb, as well as to improve fault tolerance and high availability of network equipment.

Organizational and technical measures were taken to decommission obsolete equipment and put into operation the new one.

Statistics: changes in terms of application filings and grants with respect to previous year; trends or areas experiencing rapid changes

Inventions

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Applications filed:

in 2018 – 3,968, in 2019 – 3,852, i.e. 2,9 % decrease with respect to the previous year.

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Patents granted:

in 2018 – 2,469, in 2019 – 2,255, i.e. 8,7 % decrease with respect to the previous year.

From January 1, 2019 to December 31, 2019 within the framework of experimental tests of the electronic filing system for IP rights, 596 applications for inventions were received (6,5 % more than in the previous year, 16,5% of the total number of the applications for inventions).

In 2019, in comparison with the previous year, the following areas experienced rapid changes: "Semiconductors" (+50.8), "Unclassified" (+48.8), "Micro-structural and nano-technology" (+39.3), "Digital communication" (-36.1), "Thermal processes and apparatus" (-31.4), "Mechanical elements" (-27.1), "Optics" (-26.8), "Telecommunications" (+25.4), "Analysis of biological materials" (-23.8), "Medical equipment" (-22.8), "Audio-visual technology" (-22.5), "Basic communication processes" (-21.1), "Control" (+20.2), "Food chemistry" (-18.4), "Metal-cutting machines tools" (+17.9), "Engines, pumps, turbines" (+14.9).

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Utility models

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Applications filed:

in 2018 – 9,120, in 2019 – 8,458, i.e. 7,3 % decrease with respect to the previous year.

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Patents granted:

in 2018 – 8,620, in 2019 – 8,412, i.e. 2,4 % decrease with respect to the previous year.

From January 1, 2019 to December 31, 2019 within the framework of experimental tests of electronic filing system for IP rights, 722 applications for utility models were received (49.2 % increase with respect to the 2018 year, 8.5 % of the total number of the applications for utility models).

In 2019, in comparison with the previous year, the following areas experienced rapid changes: "Basic communication processes" (-50.6%), "Unclassified" (+30%), "IT methods for management" (+30.0%), "Audio-visual technology" (-29.1%), "Biotechnology" (-25.5%), "Thermal processes and apparatus" (-24.4%), "Mechanical elements" (-21.9%), "Other special machines" (-20.6%), "Engines, pumps, turbines" (+19.3%), "Civil engineering" (-19.1%), "Metal-cutting machines tools" (-18.5%), "Digital communication" (-18.4%), "Transport" (-15.5%), "Computer technology" (+15.2%), "Other consumer goods" (+15.1%), "Furniture, games" (+13.1%), "Food Chemistry" (-10.9%), "Materials, metallurgy" (-10.2%).

Other matters and useful links (URLs): annual report of the Office, news page, statistics, etc.

Annual Reports, Annual Technical Reports on Patent Information Activities, statistics of the Office:

<https://ukrpatent.org/uk/articles/statistics>

News of the Office on the issues related to patents:

<http://www.me.gov.ua/> (Intellectual Property section)

<https://ukrpatent.org/en>

Information on the patent legislation:

<http://www.me.gov.ua/> (Intellectual Property section)

<https://ukrpatent.org/uk/articles/legislation-and-standards>

Information on the intellectual property representatives (Patent Attorneys) providing services in the sphere of intellectual property rights protection:

<http://www.me.gov.ua/> (Intellectual Property section)

Since 2017, an integrated state web portal of open datasets (<https://data.gov.ua>) has been in operation for searching in the data sets of the state registers of industrial property rights and the State Register of Intellectual Property Representatives (Patent Attorneys).

For easy uploading of data on industrial property rights in JSON format and further formation of own databases, the SIS API based on the HTTP protocol has also been created. The SIS API is available at <https://sis.ukrpatent.org/api/v1/open-data/>.

II. SERVICES AND ACTIVITIES RELATED TO PATENT INFORMATION CARRIED OUT BY THE OFFICE

Information and support provided by the Office to applicants regarding filing on paper and/or e-filing (instructions, seminars, etc.) - URLs

Information for the users on the procedures and sources of data on inventions and utility models, in particular information on the legislation in the sphere of inventions and utility models, services and activities of the Office related to information in this sphere, statistics, etc. is published on the websites of the Ministry (<http://www.me.gov.ua/>) and Ukrpatent (<https://ukrpatent.org/>).

The list of information services, including the paid ones, provided by Ukrpatent, in particular by its Department of Patent Information Services, Consultations and Innovation Activity Promotion, is published on the websites of Ukrpatent and the mentioned Department (<http://iii.ua>).

Information for applicants on filing applications for inventions and utility models is available on the websites of the Ministry (<http://www.me.gov.ua/>) and Ukrpatent (<https://ukrpatent.org/>).

Electronic applications is performed through the Electronic Applications Filing System (EAFS). The applicant's personal account was implemented in the system providing access to all documents generated in the process of interaction between the examination body and applicants during [processing of patent applications](#).

Electronic applications filing and electronic exchange between the examination body and applicants may also be carried out by means of the Electronic Interaction System (EIS) of the Examining Authority.

Advisal on the work with systems, rules of drafting an application, user manuals and regulatory documents are available on the Ukrpatent website at:

<http://base.ukrpatent.org/efiling;>

<https://sev.ukrpatent.org/>.

Electronic documents are signed with a qualified electronic signature. Information on how to get an electronic digital signature (qualified electronic signature) is available on the Ukrpatent website in the "Receiving Electronic Trust Services" section at:

https://ukrpatent.org/i_upload/file/Poriadok-nadannia-poslug-ECP-2017--.pdf.

To provide services (placement of orders, payment for services, transfer of orders from the personal account to Ukrpatent specialists, correspondence with customers of services etc.) the Online Customer Account for Services provided by Ukrpatent (OCAS) has been created.

The OCAS was put into operation in 2019.

To ensure access of a wide range of users to the Ukrpatent information resources, the Special Information System (SIS) has been introduced.

The SIS was put into operation in 2019.

<https://sis.ukrpatent.org/uk/search/simple/>

Access to online publications containing information on inventions and utility models is provided through the websites of the Ministry (<http://www.me.gov.ua/>) and Ukrpatent (<http://ukrpatent.org/uk>).

Availability of the application dossier in electronic form

All application materials (both primary and secondary) for inventions and utility models, irrespective of the way they are filed to Ukrpatent (through the electronic filing system, on paper carriers, by email, fax or other telecommunication networks), automatically and after scanning paper carriers are entered and stored in the electronic archive of documents. In order to use application materials during the processing of applications, the integration of technological automated systems with the electronic document archive has been implemented.

Classification¹, preclassification² (if applicable), reclassification³ activities; classification systems used (e.g., International Patent Classification (IPC)); matters concerning indexing of patent information

In 2019, IPC 2019.01 translated into Ukrainian and introduced by the corresponding order of the Ministry was used for classifying patent documents of Ukraine.

Within the Inventions AS the software system for checking classification symbols is operative. It includes classification guides and specialized software for checking the allotted classification symbols and reclassifying.

In 2019 the whole retrospective file of national patent documents was reclassified according to IPC 2019.01.

The Ukrainian-language 2019 version of the Guide to the IPC was formed and placed in the information and reference system (IRS) for IPC 2019.01.

During the second half of 2019 a set of works was undertaken necessary to ensure the implementation of IPC 2020.01 translated into Ukrainian in the state system of intellectual property legal protection as of January 1, 2020, in particular, a respective IRS was created.

Abstracting, reviewing, and translation of the information contained in patent documents

Abstracts and bibliographic data are formed routinely in the Ukrainian language for publication in the National CD-ROM "Inventions in Ukraine" and on the Internet in the specialized database "Inventions (Utility Models) in Ukraine".

Other activities

III. SOURCES OF PATENT INFORMATION PROVIDED BY THE OFFICE

Main types of publications of the Office (patent applications, full text, first pages, abstracts, bibliographic data, granted patents, etc.), medium (on paper, on CDs, online - URLs)

Information of the Office concerning inventions (utility models) is provided by publication in printed sources of the intellectual property legal protection sphere, patent information products on optical carriers, free information and retrieval Internet resources of Ukrpatent – electronic databases (DB), information and reference systems (IRS) and the Specialized Information System of Ukrpatent (SIS).

- the Bulletin "Industrial Property" – a printed periodical edition;
 - the electronic edition of the Bulletin "Industrial Property" – the analogue of a printed edition of the official bulletin;
 - the electronic edition of the bulletin "Industrial Property" (on CD-ROM with an integrated search system) – the analogue of a printed edition;
 - the National CD-ROM "Inventions in Ukraine" – electronic edition of specifications to patents of Ukraine for inventions (utility models);
 - DB "Electronic Version of the Cumulative Official Bulletin 'Industrial Property'" (<http://base.uipv.org/searchBul/>);
 - Specialized DB "Inventions (Utility Models) in Ukraine";
 - Collective Access DB "Information about Invention Applications Accepted for Examination";
 - IRS "Invention and Utility Model Applications Prosecution State";
 - IRS "Information on Patents of Ukraine for Inventions (Utility Models) Deemed to be Invalid or Expired";
 - IRS "International Patent Classification" – through this link the current version of the IPC in the Ukrainian translation and all the previous versions that ceased to be in force and are available for information: the Ukrainian versions from 2006.01 to 2016.01 and the full text of IPC in the Ukrainian translation starting from 2016.01 version.
 - "Special Information System of Ukrpatent (SIS)".
- (<https://sis.ukrpatent.org/uk/search/simple>)

Information concerning inventions and utility models is published in Book 1 of the Bulletin "Industrial Property" in the following sections: "Information on Invention Applications Accepted for Examination", "Information on the Grant of Patents of Ukraine for Inventions", "Information on the Grant of Patents of Ukraine for Utility Models", in the Indexes to each section and in the "Notices" section.

Publications in the Bulletin "Industrial Property" contain:

- for section "Information on Invention Applications Accepted for Examination" – bibliographic data;
- for sections "Information on the Grant of Patents of Ukraine for Inventions", "Information on the Grant of Patents of Ukraine for Utility Models" – bibliographic data and claims.

The Bulletin "Industrial Property" was issued twice a month – 24 issues of the bulletin were issued during 2019. The Annual Index to the bulletin for the previous, 2018, year was also published.

Ukrainian patent (utility model) specifications on electronic carrier – the National CD-ROM "Inventions in Ukraine" – were issued with the same frequency.

Publications in electronic information resources contain:

- electronic edition of the Bulletin "Industrial Property"

- DB "Electronic Version of the Cumulative Official Bulletin "Industrial Property" – information concerning inventions and utility models is published in the same scope as in printed edition. Moreover, information concerning legal status of patents (as an extra operational element) is provided in the sections "Information on the Grant of Patents of Ukraine for Inventions", "Information on the Grant of Patents of Ukraine for Utility Models";

- Specialized DB "Inventions (Utility Models) in Ukraine" contains the following data for each patent: bibliographic data, claims, abstracts, patent specification and legal status information.

Official Gazettes: main types of announcements, frequency of publication, medium (on paper, on CDs, online - URL), etc.

In the Notices section of the Bulletin "Industrial Property" (printed and electronic edition) with the periodicity of its release, announcements in respect of registered patents for inventions (utility models) (to the extent provided by the respective applicable Law of Ukraine) are published which include the information:

- on [renewal of patents](#) of Ukraine for inventions, the object of which is a drug, animals protection agent, plant protection agent, the use of which requires approval of a competent authority; changes in the information entered into the State Register of Patents of Ukraine for Inventions, information on the issue of patent duplicates, information on correction of obvious errors in specifications to patents of Ukraine for inventions, modifications due to the correction of errors and other information relating to registration of patents of Ukraine for inventions;

- changes in the information entered into the State Register of Patents of Ukraine for Utility Models, information on the issue of patent duplicates, information about correction of obvious errors in the specifications to patents of Ukraine for utility models, modifications due to the correction of errors and other information relating to the registration of patents of Ukraine for utility models.

The said information is available at <http://www.me.gov.ua/> and <https://ukrpatent.org/uk>.

Information products and patent document collections (coverage, medium, etc.) available to examiners, including external collections and databases

Ukrpatent's search collection (Patent Information Base – PIB) is an electronic information resource composed in accordance with the approved PIB content and intended for carrying out patent information searches for determining the state of the art in the course of substantive examination of patent applications which has been in operation since July 1, 1997.

The PIB contains the national and foreign patent collections, primarily of international and regional intellectual property organizations (WIPO, the EPO and the EAPO), patent documents issued by the leading Offices falling within the PCT Minimum Documentation. The documentation available in the electronic search collection has sufficiently deep retrospective and is constantly updated by current acquisitions of foreign patent documentation.

The search collection of the national patent documentation used in the local mode includes Inventions AS database (bibliographic data) and the Central Electronic Document Archive (CEDA).

Updating of the PIB was implemented by current acquisitions of patent documentation, in particular:

- updating of the Inventions AS database and the CEDA was implemented routinely by scanning incoming documents, converting them into electronic format and loading to the appropriate databases available on the website of Ukrpatent;

- electronic documents filed through the electronic application filing system were loaded to the databases in automatic mode;

- foreign patent documents received by Ukrpatent in the framework of international exchange (on optical carriers or through corresponding FTP-servers), were loaded into the electronic database of the Search Portal.

Over the course of 2019, the Examination Reference and Information Collection was stocked with encyclopedias, reference books (including on electronic carriers), legal and instructional and methodological literature, periodicals as well as the national patent documentation – current publications of the Bulletin "Industrial Property" on CD-ROM and the National CD-ROM "Inventions in Ukraine". The formation of electronic reference and search tool and a full-text non-patent literature DB of the Search Portal was provided.

The following resources were also used in 2019 as a search collection of non-patent literature, in addition to foreign commercial databases (the list is provided below):

- collections (including electronic) of 96 largest national and specialized libraries of Ukraine;
- collections of foreign countries' libraries (in the electronic delivery of documents);
- free national and foreign Internet resources, in particular, electronic digital libraries.

In 2019, as in the previous years, the activities on providing access for Ukrpatent examiners to the defined foreign commercial information resources which contain the PCT Minimum Documentation and the use of which is a prerequisite of quality patent search were given particular emphasis in the context of Ukrpatent's functioning as ISA/IPEA. The significance and relevance of this task will remain in place, as in October 2017 the Agreement was signed between the Ministry and the International Bureau of the World Intellectual Property Organization in relation to the functioning of the State Enterprise "Ukrainian Intellectual Property Institute" as an International Searching Authority and International Preliminary Examining Authority under the Patent Cooperation Treaty, entering into force on January 1, 2018, and remaining in force until December 31, 2027.

In order to provide effective and high-quality search in the course of patent applications examination, 11 foreign commercial information Internet resources were used in 2019 as a search collection which, under respective agreements, provided access to the PCT Minimum Documentation (patent documentation and non-patent literature). These include the following databases: the EPO EPOQUE Net system; STN Files, Features and Services; REAXYS database; Derwent World Patent Index database; ScienceDirect ArticleChoice service; Access to Research for Development and Innovation (ARDI) program by WIPO; products of the American Chemical Society (ACS); IEEE Xplore digital library; electronic products of Wiley Online Library, Reaxys Medicinal Chemistry database, EMBASE database.

The EPO EPOQUE Net system remained the main search tool among foreign commercial Internet resources as it provided access of examiners to the patent documentation of the PCT Minimum Documentation to the full extent.

The agreement on the granting of access for Ukrpatent's examiners to EPOQUE Net, concluded with the EPO in 2017, is in force until December 31, 2020.

Information products and patent document collections (coverage, medium, etc.) available to external users, conditions of access (e.g., free of charge, subscription, etc.)

For information support of the wide range of public, free access to the information concerning patents is provided through the websites of the Ministry and Ukrpatent – see the list of databases and information and reference systems above.

Information on registered patents for inventions and utility models is available in the form of open data on the integrated state web portal of open datasets (<https://data.gov.ua/>).

Annual Reports of the Office, Annual Technical Reports of the Office on Patent Information Activities which Ukrpatent prepares for WIPO, the quarterly statistical review "Industrial Property in Figures. Performance Indicators in the Sphere of Industrial Property" (the Internet publication "Industrial Property in Figures") are also accessible for free on the Ukrpatent website.

External users could also purchase the Bulletin "Industrial Property" on CD-ROM equipped with a search system and the National CD-ROM "Inventions in Ukraine".

The Bulletin "Industrial Property" on CD-ROM and the National CD-ROM "Inventions in Ukraine" were distributed for free in the framework of updating patent collections of certain organizations of Ukraine by the national patent documentation according to the Registries of free-of-charge distribution approved in due order.

See also Part 1 of Section 5 concerning the PPDC.

The List of Addresses of Foreign Databases Accessible Free of Charge on the Internet and the List of Scientific and Technical Databases and Reference Resources Accessible Free of Charge are also placed and quarterly updated on the website of Ukrpatent.

Legal status information (kind of information, coverage, medium, etc.)

Information concerning the legal status of the registered patents of Ukraine for inventions (utility models) to the extent prescribed by the applicable law of Ukraine is published in the Bulletin "Industrial Property" in the Notices section both on paper and in electronic form (the CD-ROM "Bulletin "Industrial Property" and the DB "Electronic Version of the Cumulative bulletin "Industrial Property").

In addition, such information is provided in the IRS "Information on Patents of Ukraine for Inventions (Utility Models) Deemed to be Invalid or Expired" and (as an extra operational component) in the relevant sections of the DB "Electronic Version of the Cumulative Official Bulletin "Industrial Property" and in the specialized DB "Inventions (Utility Models) in Ukraine".

Other sources

IV. ICT SUPPORT TO SERVICES AND ACTIVITIES RELATED TO PATENT INFORMATION CARRIED OUT BY THE OFFICE

Specific software tools supporting business procedures within the Office: general description, characteristics, advantages, possible improvements

The specific software tool that ensured the main types of activity related to the patent information is the Inventions AS.

The Inventions AS ensures automation of the processes for record-keeping of the applications for inventions, utility models and topographies of integrated circuits, as well as for the registration and maintenance of the validity of these titles of protection.

The Inventions AS consists of the specialized software and databases.

The functionality of the Invention AS covers all the stages of life cycle of applications for inventions, utility models and topographies of integrated circuits:

- filing of application;
- registration of application;
- formal and qualified examination of application;
- registration of titles of protection;
- publication in the Bulletin "Industrial Property";
- keeping titles of protection valid;
- maintenance of the State Registers of patents for inventions, utility models and topographies of integrated circuits;
- maintenance of the license and rights transfer agreements register;

- providing references, statistics data etc.

The Inventions AS has a divided structure with automated workplaces and common interface access to all the functions, ensures a complete electronic document management of input, output and internal documents with the use of a bar code technology.

The Inventions AS is integrated with technological automated systems (AS) of Ukrpatent, namely:

- operating storage of documents (central electronic archive of documents);
- Accounting of Payments AS;
- search portal;
- Management of the National Version of IPC AS;
- Output Documents AS;
- General Document Management AS;
- Electronic Applications Filing System;
- Internet databases and information and reference systems;

Hardware used to supporting business processes of the Office

The server part is based on Hewlett-Packard (HP) server x86 platforms (DL380Gen10, DL380Gen8, DL380G7, DL380G5, DL360 Gen8).

Information storage models are:

HP (3Par StoreServ 7200, MSA2050, MSA2040, P2000, MSA2324fc).

The Storage Area Network (SAN) is based on the HP SN3000B, HP SAN Switch 8/24.

The general network infrastructure is based on:

- the cluster made of two Checkpoint NGTP 5600 devices which contains the VPN and Firewall modules for Internet connection and provides control of access to the Internet sites and security of the Ukrpatent IT infrastructure from complex threats and harmful attacks (botnets, targeted attacks, APT attacks and zero day attacks);
- the separate Checkpoint SandBlast Appliance TE100X device. Threat Emulation, which further prevents infection of networks from unknown sources, protects against the zero-day vulnerability and targeted attacks;
- Barracuda Spam & Virus FireWall for mail server protection.
- internal router (designed on the Unix server) to support the Ukrpatent local computer network.

The local computer network includes the set of HP Aruba 8320, Aruba 2930M, HP Procurve 2910al-24G, HP 2530-48, HP 2510-48 switches and divided into fifty virtual networks (Vlan).

The server infrastructure is completely virtualized. The Microsoft Hyper-V Server 2016 and VMware ESXi operating system is used on physical servers which allow to create and operate the productive virtual servers. The servers of virtualization are grouped into Hyper-V clusters which allow to organize high availability of the productive servers with the Microsoft Windows Server 2019, Microsoft Windows Server 2016, Microsoft Windows Server 2012R2, Microsoft Windows Server 2012, Microsoft Windows Server 2008R2 and CentOS 7 operating systems.

The MS SQL Server 2017, MS SQL Server 2016, MS SQL Server 2014, MS SQL 2008R2, MS SQL 2005, PostgreSQL, MySQL are used as the databases management systems.

Domain structure of the Active Directory (AD) is designed to allow the centralized management of all formation resources, including users, computers, files, peripheral devices, access to the services, network resources, websites, databases, etc.

Multiple domain controllers are used to organize the fault-tolerant domain structure.

The WSUS server provides updating of the servers and client's computers operating systems.

The ESET anti-virus server provides centralized control of all anti-virus programs on the user computers, anti-virus databases updates, report generation on database updates and existing threats.

The Veeam company software product – Veeam Backup & Replication, which ensures continuous protection for reliable recovery of virtual and physical servers, is used for data backup. The plan of upgrading all servers and services after a failure was adjusted.

Other Microsoft System Center 2019 products, namely Virtual Machine Manager (SCVMM), System Center Configuration Manager (SCCM) are also used for virtualization management and for installing operating systems and to configure programs, respectively.

The activities on the IT infrastructure development, carried out over the reporting period, were aimed at building the fail-safe core of the computer network, increasing its bandwidth, security and manageability, replacing the obsolete components of a hardware part of infrastructure, consolidation and virtualization of the servers. The servers of virtualization are integrated into clusters, which ensure high availability of all systems.

In total, the corporate network consists of 650 personal computers, 24 physical and 76 virtual servers, 10 storages of information and various switching equipment.

For the information systems users the Internet connection is provided to search and browse information.

Internal databases: coverage, updates, interlinks with external sources

To ensure business processes, the following databases are used in Ukrpatent:

- the CEDA database which provides storage of documents and their attributes in electronic form;
- the Inventions AS technological database which ensures performing the procedures of the examination record-keeping and maintenance of the State Register of Patents for Inventions and Utility Models. The database contains the whole range of information on applications and patents for inventions (utility models) from the moment of founding the Patent Office of Ukraine (1993). The data are updated on an ongoing basis in line with the process of filing new applications, carrying out record-keeping on the procedures of application examination and keeping patents in force;
- special database for ensuring the functions of electronic filing of applications for inventions and utility models;
- the Search Portal database which provides possibility for experts to carry out searches in multiple collections of patent and non-patent literature.

Some of these databases have external connections with remote information sources. For example, the technological database has an indirect connection with the International Bureau of WIPO via PCT-EDI system.

Establishment and maintenance of electronic search file: file building, updating, storage, documents from other offices included in the search file

The electronic search collection is located on the internal information resource called the Search Portal. This resource was created to enable access and search patent documentation and non-patent information sources in the process of patent application examination. The data at the Portal are updated regularly once current patent documentation updates are made available by foreign patent offices on optical carriers or uploaded from corresponding ftp-servers.

In 2019, in the framework of international exchange of patent documentation, Ukrpatent continued to receive optical discs with patent documents from foreign patent offices (6 countries) and data sets via FTP servers (from 4 countries). Loading of data from 218 optical carriers to the active information storage and its accessibility for search through the Search Portal was provided.

Administrative management electronic systems (register, legal status, statistics, and administrative support)

The functions of the administrative management are implemented in the environment of the Inventions AS by separate software subsystems and software modules.

Thus, to maintain the registers and legal status of titles of protection for all IP rights, a multifunction subsystem is operative within the automated systems. The information from this system is forwarded to relevant databases for publication and for drawing statistic reports.

The Indicators statistical subsystem is characterized by the capability to form multiple reports and implementation of a mechanism of calculation of indicators by objects which have multiple details for all IP rights.

Other matters

V. PROMOTION ACTIVITIES AIMED TO SUPPORT USERS IN ACCESS AND EFFICIENT USE OF PATENT INFORMATION

Patent library: equipment, collection management, network of patent libraries in the country, cooperation with foreign patent libraries

In order to satisfy public needs for patent information in Ukraine, which is necessary for study and analysis in the process of creation, legal protection and use of IP rights, the Public Patent Documentation Collection (PPDC) functions within the structure of the Department of Patent Information Services, Consultations and Innovation Activity Promotion. The PPDC is the most comprehensive patent library in Ukraine available to the public (intellectual property office library).

International exchange with foreign patent offices has long been the main source of foreign patent documentation. Such international cooperation allowed accumulating in the state system of intellectual property rights protection a considerable amount of current and retrospective foreign patent documentation, in particular official bulletins of many countries. The PPDC also contains methodological, reference and informational and periodical materials.

Current updating of the PPDC by national and foreign patent documentation on optical discs continued during 2019. In 2019 the PPDC was updated by nearly 340 optical discs with current national and foreign patent documentation. As of December 31, 2019, the PPDC collection of optical discs constitutes nearly 34,270 items.

Free access to the PPDC materials for users to work in the reading room was provided. The work of the customers with the collections of patent documentation available in the PPDC on optical carriers in foreign languages was carried out jointly with the consultants of the Department of Patent Information Services, Consultations and Innovation Activity Promotion of Ukrpatent.

In 2019 the PPDC was attended by 82 users, 5% of which were legal entities and 95% – individuals.

Information concerning the contents of the PPDC and its quarterly updating was published in the Patent Information Files section on the websites of Ukrpatent (<https://ukrpatent.org/uk>) and its Department of Patent Information Services, Consultations and Innovation Activity Promotion of Ukrpatent (<http://iii.ua>).

Throughout 2019 proper storage conditions for the PPDC documents were ensured which correspond to respective requirements and guarantee the documents' safety.

The PPDC is located on the premises of the Department of Patent Information Services, Consultations and Innovation Activity Promotion of Ukrpatent in the three specially adapted and equipped areas (two depositaries with the total area of 81 sq. m. and a reading room of 40 sq. m.). The PPDC is equipped with 10 up-to-date computers with appropriate licensed software, as well as scanners, printers and xerographic copying machines.

To enable users to make online access to the electronic patent-information resources, such as the Digital Patent Library, the Internet access based on Wi-Fi technology was provided in addition to the traditional Internet access for users' convenience.

Consultations were provided free-of-charge concerning optimal ways to carry out information search, qualified drawing up of retrieval schedule, search on CD-ROMs and in the free databases of patent documentation via the Internet and consultations on the most common issues: concerning the detection of the subject matter of invention or utility model in the materials presented by the applicant, acquisition of IP rights, detection and discontinuation of unlawful use of IP rights.

A total of 300 consultations were provided concerning verification of correctness of drawing up of application materials, including 60 for patents for inventions/utility models.

Consultations on the most common issues were provided on a day-to-day basis:

- concerning the procedure for obtaining legal protection for an invention/utility model (over 20 consultations of this type per day);
- concerning defining the subject-matter of an invention or a utility model in the materials presented by the applicant (in total for the year – over 60 consultations);

Fulfilling user requests, the employees of the Department of Patent Information Services, Consultations and Innovation Activity Promotion of Ukrpatent provided appropriate paid services, including carrying out different types of search of patent information and documentation.

In particular, the following information searches were carried out during the year 2019: 7,062 title searches were made by all IP rights types on the requests of arbitration managers and liquidators of bankrupt enterprises, the Ministry of Justice of Ukraine, including 154 paid searches; 14 title searches by all IP rights types ordered under the contracts; over 60 information searches regarding inventions and nearly 600 searches regarding utility models to conduct a preliminary evaluation of compliance of the declared object with conditions of legal protection; 15 searches within the specialized database "Inventions (Utility Models) in Ukraine" in sections A and C; 13 thematic (information) searches regarding inventions (utility models). In addition, upon the request of users 11 recommendations were given on drawing up application materials for inventions (utility models).

Since April 2017, the WIPO Depository Library has been functioning on the basis of the Department of Patent Information Services, Consultations and Innovation Activity Promotion of Ukrpatent with the free-of-charge access to the documents.

Publications related to different business procedures and patent information sources available to users, for example, books, brochures, Internet publications, etc.

The Ukrpatent website provides free access to:

- information on inventions (utility models) published in Annual Reports, Annual Technical Reports of the Office on Patent Information Activities prepared by Ukrpatent for WIPO, quarterly issues of the Internet publication "Industrial Property in Figures" (statistical information);
- the Methodological Recommendations on Certain Matters Relating to Invention (Utility Model) Applications Examination (https://ukrpatent.org/i_upload/file/metod-rekom-vynakhid-2017.pdf).

Periodicals, e.g. scientific and practical magazine "Intellectual Property in Ukraine", which is distributed as paper and electronic edition over the territory of Ukraine by subscription, publish articles (including by the specialists of the state system of intellectual property legal protection) on various matters and in particular relating to legal protection of inventions (utility models). The printed edition of the magazine is accessible free of charge at the PPDC of the Department of Patent Information Services, Consultations and Innovation Activity Promotion of Ukrpatent.

The list of articles, speeches, slide presentations, methodical recommendations and practical manuals on topical issues of intellectual property, prepared by specialists of Ukrpatent for the period from 2004 to 2019, is available on the website of Ukrpatent. A certain part of the documents is available in electronic form.

Office's initiatives on providing foreign patent information in the local language(s) (e.g., machine translation tools, translation of abstracts)

Since 2017, the IPC Internet publication on the WIPO website has the link to the text of the current version of the IPC translated into Ukrainian through the "bridge" function.

In order to provide information support to the development and functioning of the state system of intellectual property legal protection, in particular, to improve the Ukrainian patent and terminology base, standardization and unification of terminology in the intellectual property sphere, Ukrpatent carries out translation of the WIPO Standards into Ukrainian, primarily those that have more practical value and relate to various IP right types, and ensures their timely updating.

In total, Ukrpatent has translated twenty WIPO Standards (with no official status), available on the Ukrpatent website in WIPO Standards section.

Cooperation with universities, research centers, technology and innovation support centers, etc.

Over the reporting year with the purpose of updating patent collections of certain organizations of Ukraine (bodies of national system of scientific and technical information, in particular state and national libraries as well as universities, departments of which are entrusted with the appropriate information functions, including universities' business innovation centers) the Bulletin "Industrial Property" on CD-ROM and the National CD-ROM "Inventions in Ukraine" which contains specifications to the patents of Ukraine for inventions and utility models were sent free of charge to the specified and some other organizations of Ukraine according to the free of charge distribution Registries approved in the due order.

Education and training: training courses, e-learning modules (URLs), seminars, exhibitions, etc.

Detailed information on the activities of the state system of intellectual property legal protection in 2019 is published on the Ukrpatent website, in particular, in the quarterly issues of the Internet publication "Industrial Property in Figures" and is also included in the Annual Report on the Ukrpatent activities in 2019.

Other activities

In 2019, in order to provide coverage of the peculiarities of the use of IP rights the section "Information Support of Invention Activities" was created by the Department of Patent Information Services, Consultations and Innovation Activity Promotion of Ukrpatent on the website of the department (<http://iii.ua/uk>), which contains the following sections: "Methodological support", "Grant programs" and "Success stories". In the reporting year, practical, methodological assistance was provided to applicants and holders of titles of protection for IP rights on the commercialization of intellectual property and on the reflection in the accounting of the use of intangible assets and taxation of transactions with them.

In 2019 the Department of Patent Information Services, Consultations and Innovation Activity Promotion of Ukrpatent ensured the functioning of the Industrial Property Internet Exchange (<http://exchange.iii.ua/en>) aimed at promoting domestic inventions on the market, encouraging the development of inventive and innovative activities, increasing the level of public awareness on the intellectual property importance and informing the wide range of stakeholders.

Contractual services provided to the customers of the Industrial Property Internet Exchange include:

- compilation, coordination, translation, posting on the website and follow-up of the information about their IP rights;
- work with individuals that have expressed an interest in the IP rights, represented on the Internet Exchange (over 370 consultations on the matters of functional activity of the Industrial Property Internet Exchange and the Innovations Department);
- 11 projects relating to inventions and utility models were placed in the Internet Exchange.

In total, 147 projects were prepared, placed and updated on the Industrial Property Internet Exchange in the reporting year.

To promote the development of talented and creative youth of Ukraine a useful resource is in operation – the Factory of Ideas (<http://fabrikaidei.iii.ua/>) – that unites young people keen on science seeking to develop the scientific potential of our state, to promote inventive activity and to implement their own ideas and developments in life.

The purpose of its functioning is to identify, support and promote the development of the gifted pupils and students, young scientists, inventors, researchers and innovators.

The users of the resource placed their best practices and ideas on the pages of the Factory of Ideas free of charge. In 2019 the Factory of Ideas had about 208 projects.

Innovation Promotion section functions on the Internet Exchange website and the Factory of Ideas resource. Information on existing contests, grants, conferences is published at this section to stimulate the growth of inventive activities and provide more opportunities to promising scientists for receiving financing and for developing business opportunities.

VI. INTERNATIONAL COOPERATION ACTIVITIES IN THE FIELD OF PATENT INFORMATION

International exchange and sharing of patent information in machine-readable form, e.g., priority documents, bibliographic data, abstracts, search reports, full text information

The functions of patent documentation international exchange are performed by Ukrpatent, recognized in 2003 by the law as the Centre of International Exchange of Publications according to the Convention on International Exchange of Publications, adopted on December 3, 1958 by the UN General Conference on the matters of education, science and culture.

In 2019, in the framework of international exchange of patent documentation, Ukrpatent received current foreign patent documentation on optical carriers from 6 foreign offices. It should be noted, that the decrease tendency retained in the number of disks with foreign patent documents received by Ukrpatent, which is connected with discontinuation by foreign patent offices of the traditional ways of publishing patent documents on physical carriers and providing access to it through the Internet and extension the data exchange, mainly through the offices FTP-servers.

Thus, in 2019 Ukrpatent downloaded patent documentation of four patent offices (the EAPO, Austria, Great Britain, Rospatent) from the FTP-servers to the Search Portal.

In 2019, in the framework of international exchange, Ukrpatent also:

- sent the Bulletin "Industrial Property" on CD-ROM to 6 foreign patent offices, the National CD-ROM "Inventions in Ukraine" – to 3 offices.
- provided access via the FTP server to the bulletin "Industrial Property" for the Austrian Patent Office, Japan Patent Office and Rospatent; to the data of the National CD-ROM "Inventions in Ukraine" – for the EPO, Austrian Patent Office, Japan Patent Office and Rospatent.

In particular, in the framework of continuing cooperation with the EPO on data exchange aimed at providing representation of retrospective and current Ukrainian patent documentation in the EPO's spacenet Internet resource and to fulfill Ukrpatent's obligations under the relevant Agreements on access of Ukrpatent to the EPO EPOQUE Net search system, in the reporting year, under the defined procedure, Ukrpatent uploaded the national patent documentation to the EPO FTP-server.

Participation in international or regional activities and projects related to patent information

In 2019, the Ministry and Ukrpatent continued international cooperation in the field of intellectual property with WIPO, the EPO, the EAPO and intellectual property offices of other countries.

In 2019, representatives of the Ministry and Ukrpatent participated in WIPO events, in particular, in sessions and meetings of WIPO Committees and Working Groups.

In the framework of international cooperation, the Ukrpatent specialists participated (online) in the work of six Task Forces of the Committee on WIPO Standards (CWS) on the development of new WIPO Standards, their updates and other CWS projects:

- Legal Status Task Force;
- Authority File Task Force;

- Sequence Listing Task Force (SEQL);
- Part 7 Task Force (Handbook on Industrial Property Information and Documentation);
- Public Access to Patent Information Task Force;
- Blockchain Task Force.

Cooperation with the EPO on data exchange aimed at providing representation of the Ukrainian patent documentation in the EPO's spacenet Internet resource was continued.

Assistance to developing countries

Other activities

VII. OTHER RELATED MATTERS

One of the priority objectives of the examination body is to ensure effective functioning of the Quality Management System (QMS) of the examination procedure for industrial property rights applications introduced in 2012 at Ukrpatent. Certificate No. 321012076/2 concerning the Ukrpatent QMS compliance with the requirements of the ISO 9001:2015 international standard is valid till September 14, 2021.

In August 2019, the independent certification organization carried out the inspection (supervisory audit) of the QMS compliance with the requirements of the ISO 9001: 2015 standard at Ukrpatent. According to the results of the inspection, the QMS meets the requirements of the ISO 9001: 2015 standard.

In 2019, there were no significant changes in the functioning of the Ukrpatent QMS.

1. Classification is allotting one or more classification symbols (e.g., IPC symbols) to a patent application, either before or during search and examination, which symbols are then published with the patent application.

2. Preclassification is allotting an initial broad classification symbol (e.g., IPC class or subclass, or administrative unit) to a patent application, using human or automated means for internal administrative purposes (e.g., routing an application to the appropriate examiner). Usually preclassification is applied by the administration of an office.

3. Reclassification is the reconsideration and usually the replacement of one or more previously allotted classification symbols to a patent document, following a revision and the entry into force of a new version of the Classification system (e.g., the IPC). The new symbols are available on patent databases.

4. According to the Resolution of the Cabinet of Ministers of Ukraine of September 2, 2019 829 "Some Issues of Optimizing the System of Central Executive Bodies", in order to optimize the system of central executive bodies and in accordance with paragraphs 9 and 9-1 of Article 116 of the Constitution of Ukraine, the Ministry of Economic Development and Trade of Ukraine was renamed as the Ministry for Development of Economy, Trade and Agriculture of Ukraine.