

NATIONAL INTELLECTUAL PROPERTY AUTHORITY**STATE ENTERPRISE
"UKRAINIAN INSTITUTE OF INTELLECTUAL PROPERTY"
(UKRPATENT)****STATE ORGANIZATION
"UKRAINIAN NATIONAL OFFICE FOR INTELLECTUAL PROPERTY
AND INNOVATIONS" (UANIPIO)¹****ANNUAL TECHNICAL REPORT
ON PATENT INFORMATION ACTIVITIES
IN 2022****1. 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**

In 2022, among the main strategic directions of the Office functioning were: patent information support in the intellectual property sphere, provision of wide public with access to the information related to intellectual property rights (IPR) acquisition and implementation of 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 the Office for examination purposes, providing access to 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 the state system of intellectual property legal protection;
- 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 providing users with continued access to electronic patent information resources and current publications of the Official Electronic Bulletin "Promyslova Vlasnist" ("Industrial Property");
- 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

¹ According to the Order of the Cabinet of Ministers of Ukraine dated October 13, 2020, No. 1267-r, the state enterprise "Ukrainian Intellectual Property Institute" (Ukrpatent) performs the functions of the National Intellectual Property Authority (NIPA).

By Order of the Cabinet of Ministers of Ukraine dated October 28, 2022, No.943-r, the functions of the National Intellectual Property Authority were transferred from Ukrpatent to the State Organization "Ukrainian National Office of Intellectual Property and Innovations" (hereinafter - UANIPIO).

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

- 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 the formation of search databases for internal use in the examination body, publication of official information about applications and granted patents in the Official Electronic Bulletin "Industrial Property", operation support of information and reference systems for information servicing of a wide range of users via the Internet.

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 was used to form the information arrays which are included to the Official Electronic 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 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.

The improvement of the Special Information System (hereinafter referred to as SIS) to provide access to up-to-date data related to pendency of applications and maintenance of state registers of intellectual property rights (IPR) titles of protection continued.

In 2022, constant technical support for SIS was provided in order to eliminate inaccuracies in the work as soon as possible, identify possible failures, and advice was provided to users using the contact form posted on the website of the state system of legal protection of intellectual property, telephone communication and by processing e-mail requests.

The 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.

In 2022, as part of the development of the SIS software packages, the section was improved for daily displaying the information about inventions/utility models for which the filing date is established.

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

- Inventions

- Applications filed:

- in 2021 – 3,390, in 2022 – 2,760, i.e. 18.6 % decrease with respect to the previous year.

- Patents granted:

- in 2021 – 2,298, in 2022 – 1,566, i.e. 31.9% decrease with respect to the previous year, including 630 to resident applicants.

In 2022, within the usage of the electronic filing system for IP rights, 941 applications for inventions were received (34.1 % of the total number of the applications for inventions), which is 14.4 % less than in 2021 (1,099 applications).

In 2022, the following areas underwent significant changes compared to the previous year: "Pharmaceuticals" (-19.0%), "Other consumer goods" (-6.6%), "Biotechnology" (+5.6%), "Organic fine chemicals" (-2.3%), "Other special machines" (-25.4%), "Chemical raw materials" (-26.6%), "Materials, metallurgy" (-14.8%), "Food chemistry" (-8.1%), "Construction" (-43.7%), "Electrical equipment, electrical appliances, electricity" (-31.6%), "Measurement" (-44.6%), "Chemical technologies" (-22.1%), "Transport" (-33.7%).

Utility models

Applications filed:

in 2021 – 4,427, in 2022 – 2,378, i.e. 46.3 % decrease with respect to the previous year.

Patents granted:

in 2021 – 4,363, in 2022 – 2,074, i.e. 52.5 % decrease with respect to the previous year.

During 2022 within the usage of the electronic filing system for IP rights, 714 applications for utility models were received (30.0 % of the total number of applications for utility models), which is 26.9 % less with respect to 2021 (977 applications).

In 2022, in comparison with the previous year, the following areas experienced rapid changes:

"Measurements" (-58.4%), "Other special machines" (-48.2%), "Construction" (-47.5%), "Food chemistry" (-45.9%), "Transport" (-45.5%), "Medical equipment" (-68.2%), "Chemical technologies" (-55.3%), "Materials, metallurgy" (-55.3%).

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

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

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

News of the Office on the issues related to patents:

<https://ukrpatent.org>

Information on the patent legislation:

<https://ukrpatent.org/uk/articles/zakonodavchi-akty>

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

https://sis.nipo.gov.ua/uk/services/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 was created and is constantly improved. The SIS API is available at: <https://sis.nipo.gov.ua/api/v1/open-data/>

2. 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 website of Office (<https://ukrpatent.org/uk>).

The list of information services, provided by the Office is published on the website of the state system of intellectual property legal protection (<http://iii.ua>).

Information for applicants on filing applications for inventions and utility models is available on the website of the state system of intellectual property legal protection (<https://ukrpatent.org/>).

Filing of applications for inventions/utility models may be carried out in paper form as well as by electronic means.

Electronic filing of applications is carried out through the Electronic Application Filing System (EAFS). The system includes an applicant's personal account, which provides access to all documents generated in the course of interaction between the examination body and the applicant during processing of patent applications.

The electronic filing of applications and electronic exchange between the examination body and applicants may also be carried out by means of the electronic interaction system (EIS EAP).

Advisal on the work with systems, rules of drafting an application, etc. are available on the website of the state system of intellectual property legal protection at:

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

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

Electronic documents are signed with a qualified electronic signature.

Access to online publications containing information on inventions and utility models is provided through the website of the Office (<https://ukrpatent.org/uk/articles/bulletin-ip>).

- 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 the Office (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.

- Classification, preclassification (if applicable), reclassification activities; classification systems used (e.g., International Patent Classification (IPC)); matters concerning indexing of patent information

In 2022, IPC 2022.01 translated into Ukrainian and introduced by the corresponding order was used for classifying patent documents of Ukraine.

During the examination of applications, the compliance of the allotted classification symbols is checked.

The system used by examiners includes reference books of classification systems and special software for checking the relevance of the invention/utility model assignment to the relevant classes during reclassification.

In 2022, the whole retrospective file of national patent documents was reclassified according to IPC 2022.01.

The Ukrainian-language 2022 version of the Guide to the IPC was formed and placed in the information and reference system (IRS) for IPC 2022.01.

During the second half of 2022, a set of necessary works was carried out to ensure the implementation of IPC 2023.01 translated into Ukrainian in the state system of intellectual property legal protection as of January 1, 2023, in particular, a respective IRS was created. Thus, the IRS for the IPC provides an option to access the full range of classification materials in Ukrainian translation: from IPC 2006.01 to IPC 2022.01.

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

Abstracts and bibliographic data are formed routinely in the Ukrainian language for publication on the Internet in the Special Information System (SIS) as well as in the specialized database "Inventions (Utility Models) in Ukraine".

- Other activities

3. 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 the Office – electronic databases (DB), information and reference systems (IRS) and the Special Information System (SIS).

- the Official Electronic Bulletin "Industrial Property"

- <https://ukrpatent.org/uk/articles/bulletin-ip> ;
- **Specialized DB "Inventions (Utility Models) in Ukraine"**;
- **Collective Access DB "Information about Inventions 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 (SIS)**
<https://sis.ukrpatent.org/uk/search/simple/>.

Information concerning inventions and utility models is published in Book 1 of the Official Electronic 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 Official Electronic 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 Invention", "Information on the Grant of Patents of Ukraine for Utility Models" – bibliographic data and claims.

In 2022, 44 issues of the Official Electronic Bulletin "Industrial Property" were issued.

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 Official Electronic Bulletin "Industrial Property" (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:

- <https://base.uipv.org/searchBul/search.php?action=viewnotices&dbname=inv>
- <https://base.uipv.org/searchBul/search.php?action=viewnotices&dbname=invd>

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

Office'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 state system of intellectual property legal protection;
- electronic documents filed through the electronic application filing system were loaded to the databases in automatic mode;
- foreign patent documents received by the Office 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 2022, the Examination Reference and Information Collection was stocked with encyclopedias, reference books (including on electronic carriers), legal and instructional and methodological literature, periodicals etc. 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 2022 as a search collection of non-patent literature:

- collections (including electronic) of 95 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.

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. For the period of martial law, access to the system was provided free of charge.

- 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 was provided through the website of the Office.

The information of the Specialized DB "Inventions (Utility Models) in Ukraine" and the Shared DB "Information on Applications for Inventions Accepted for Examination", the IRS "Invention and Utility Model Applications Prosecution State" and the IRS "Information about Patents of Ukraine for Inventions (Utility Models) Deemed to be Invalid or Expired" was constantly updated.

See also Part 1 of Section 5 concerning the PPDC.

- 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 Official Electronic Bulletin "Industrial Property" (<https://ukrpatent.org/uk/articles/bulletin-ip>).

In addition, such information is provided in the IRS "Information on Patents of Ukraine for Inventions (Utility Models) Deemed to be Invalid or Expired", in the SIS and in the Specialized DB "Inventions (Utility Models) in Ukraine".

- Other sources

4. 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 main type 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, as well as for the registration and maintenance 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:

- filing of application;
- registration of application;
- formal and substantive examination of application;
- registration of titles of protection;
- publication in the Official Electronic Bulletin "Industrial Property"
- keeping titles of protection valid;
- maintenance of the State Registers of patents for inventions, utility models;
- 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 the Office, 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 Enterprise (HPE) server x86 platforms (HPE Synergy 480 Gen10, HPE ProLiant DL380Gen10, HP ProLiant DL380Gen8).

Information storage models are: HPE 3Par StoreServ 8400, HP 3Par StoreServ 7200, HPE MSA2050, HP MSA2040.

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 Office 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 devices for mail servers protection;
- internal router (designed on the Unix server) to support the Office local computer network.

The local computer network includes the set of HPE Aruba 8320, HPE Aruba 2930M, 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 2019 and VMware ESXi operating system is used on physical servers which allow creating and operating the productive virtual servers. The servers of virtualization are grouped into Hyper-V clusters which allow organizing 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 Windows servers 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 105 virtual servers, 6 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 the Office:

- 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 and utility models from the moment of founding the State 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.

A bilateral international exchange of patent documentation (on optical carriers and via FTP) with foreign patent offices is carried out by the Office as the Center of International

Exchange of Publications which is an integral component of sources for acquisition of foreign patent documents both for examination purposes and for the public needs.

In 2022, due to quarantine restrictions in the conditions of pandemic and russia's full-scale invasion on the territory of Ukraine, current acquisition of the patent information base for examination by foreign patent documentation was mainly provided through FTP-servers from the offices of 5 countries.

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 monitor the legal status of titles of protection for all IP rights, multifunction subsystems are operative within the automated system. The information from these subsystems is forwarded to relevant databases for publication and for drawing statistic reports.

The Indicators AS 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.

The Indicators AS is built on a modular basis and provides automation of data loading, preparation of data arrays, and statistic reports drawing.

The subsystem has the ability to expand the list of indicators. The function of an automated analysis of estimated data and forecasting was implemented. The possibility to introduce information on the main economic indicators of the national development and other external factors that directly affect the state of inventive activity of applicants into the Indicators subsystem database is foreseen.

On the website of the Office free access is provided to:

- information on IP rights published in monthly reports, Annual Reports, Annual Technical Reports of the Office, quarterly issues of the booklet "Industrial Property in Figures" (statistical information).

- **Other matters**

5. 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 Office.

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 patent documentation, in particular official bulletins of many countries. The PPDC also contains methodological, reference and informational and periodical materials.

At the PPDC, users had an opportunity to get acquainted with the information on inventions/utility models published in the Official Electronic Bulletin "Industrial Property", as well as in the bulletins of foreign intellectual property offices.

Free access to the PPDC materials for users to work in the reading room as well as in remote access mode 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 with appropriate qualifications.

Throughout 2022 proper storage conditions for the PPDC documents were ensured which correspond to respective requirements and guarantee the documents' safety.

The PPDC is located in the three specially adapted and equipped areas (two depositories 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, 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.

Consultations on the most common issues were provided:

- concerning the procedure for obtaining legal protection for an invention/utility model;
- concerning defining the subject-matter of an invention or a utility model in the materials presented by the applicant.

In 2022, oral consultations on general and reference issues were provided free of charge.

Consultations on the most common issues were provided, namely:

- concerning the procedure for obtaining legal protection for IP rights (drafting, filing and examination of applications) and payment of fees for actions related to the protection of IP rights;
- concerning conducting patent information searches in online databases and information reference systems.

Since April 2017, the WIPO Depository Library has been functioning in Ukraine, with 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 website of the state system of intellectual property legal protection provides free access to information on inventions/utility models published in the Annual Reports, Annual Technical Reports of the Office on patent information activities, which the Office prepares for WIPO, and quarterly booklets "Industrial Property in Figures" (statistical information).

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

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, the Office 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, twenty-nine WIPO Standards (with no official status) have been translated, available on the state system of intellectual property legal protection 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 organisations of Ukraine (bodies of the 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 patent information functions, including universities' business innovation centres), the possibility of uploading the necessary data and forming their own collections through the API SIS was implemented.

The Technology and Innovation Support Center (TISC) is an international project launched by WIPO in April 2009. The purpose of TISC is to provide innovative development, access to knowledge and advice in the sphere of IP rights and patent information.

In Ukraine, the process of establishing the TISC network was initiated by the signing on July 23, 2018 of the Memorandum of Understanding between the Ministry of Economic Development and Trade of Ukraine and WIPO on the establishment of Technology and Innovation Support Centres in Ukraine (hereinafter - the Memorandum).

Regional TISCs are established by signing of the Memorandum of Cooperation and the agreement on participation in the TISC project between the institution responsible for the project in Ukraine. The provisions of the Memorandum and the agreement provide for joint participation in the implementation of the tasks set out in the Draft Memorandum.

Project implementation:

1. As of the beginning of 2022, 17 centres were opened in 10 regions of Ukraine. Unfortunately, due to the full-scale invasion of the Russian Federation, some of the institutions, on the basis of which TISCs were launched, have suffered significant destruction or are generally under Temporary Occupation (centers in Kharkiv and Rubizhne).

In early 2022, a report on the status of implementation of the Memorandum and achievement of quantitative indicators for the Draft document was sent to WIPO representatives.

Specialists of the Centers undergo internal training together with the representatives of the central TISC, and are granted access to the WIPO distance learning courses, WIPO and NIPA training materials, and participate in events organized by NIPA, in particular:

- in 2022, 2 educational events and an international conference were held with the participation of TISC specialists, together with WIPO and the Polish Patent Office;

- representatives of the central TISC and regional TISCs were involved in a series of trainings within the framework of the WIPO-Ukraine IPTI project - a training programme for prospective teachers of the National IP Training Center (IP Academy).

The TISC specialists of the Office have developed two guidelines on the protection and enforcement of intellectual property in the IT industry and marketing activities, which are published in the public domain at the link: <https://tisc.ukrpatent.org/ipguides.html>.

Prior to the full-scale invasion, the TISC network focused on the development of entrepreneurial education and the formation of a startup culture in the higher education institutions, on the basis of which the Centers were opened, with further raising awareness and advising stakeholders in this process, including: advising regional TISCs on the formation of startup schools, setting up work with clients and generating data for websites.

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

In 2022, the specialists of the Office participated in more than 70 specialized and educational events in the sphere of intellectual property, organized both by the Office and other international organisations, including WIPO, EPO, EUIPO, etc.

About 20 specialists of the Office completed WIPO Distance Learning courses of the IP Academy on the following topics:

- DL101 General Course on Intellectual Property;
- DL201 Copyright and Related Rights;
- DL203 Intellectual Property Traditional Knowledge and Traditional Cultural Expressions;
- DL301 Patents;
- DL302 Trademarks, Industrial Designs and Geographical Indications;
- DL317 Arbitration and Mediation Procedure under the WIPO Rules;
- DL318 Patent information Search, WIPO;
- DL320 Basics of Patent Drafting, WIPO;
- DL450 Intellectual Property Management;
- DL511 Software Licensing Including Open Source.

Almost 150 representatives of the Office took part in 32 WIPO training webinars on using PATENTSCOPE services, the Madrid, Hague systems and the Patent Cooperation Treaty (PCT), as well as events on the role of IP in various sectors of economy and creative industries.

Employees of the Office participated on regular basis as listeners and speakers in educational outreach conferences, seminars and discussions on various topics of intellectual property rights, including regional seminars organized by the CEBS group, in particular, in the Regional Seminar on Trade Secrets for Central European and Baltic States (on April, 5, 2022) and the International Conference of National IP Training Centres organized by WIPO on May 23-24, 2022.

As part of harmonization of practices and European integration, the Office specialists took part in about 15 online events organized by the EPO and EUIPO, also attended meetings of the Dialogue on Intellectual Property Rights between Ukraine and the EU on January 27, 2022. In addition, the experts continued upgrading skills in working with the EPO services and programs, in particular the patent database EPOQUE Net, the INPADOC database, etc.

In the context of enhancing cooperation with the EPO, the experts were provided with free access to the EPO Academy training catalogue on substantive examination, legal and procedural aspects of seeking patent protection from the filing date of application to the grant of a patent at the EPO. Part of the training covered issues of procedures after patent is granted, in accordance with the EPC.

Other activities

In 2022, in order to popularize knowledge about intellectual property, foster culture and respect for intellectual property, and raise awareness in the field of intellectual property, a number of events were held, namely:

- on the occasion of the World Intellectual Property Day (April 26, 2022) - together with the Patent Office of the Republic of Poland - an international online conference "Intellectual Property in the World of Games";

- webinar on the topic "Registration of Trademarks" (June 27, 2022), together with the Creative Industries Development Office under the Ministry of Culture and Information Policy of Ukraine, with the support of the USAID Programme "Competitive Economy of Ukraine" - a lecture on the trademark registration procedure was organised for representatives of the creative industries sector;

- a series of events for schoolchildren, including an online lesson for children of employees of the Intellectual Property Office (April 1, 2022), offline classes at the National Ecological and Naturalistic Center for Student Youth of the Ministry of Education and Science of Ukraine and four schools in the city of Kyiv.

In 2022, to provide information support and highlight the peculiarities of the IP rights use, the "Information Support of Invention Activities" Section was updated, the materials from the IP Academy Library were posted, and other sections and structural elements of the web resource were regularly updated.

The innovative and information resource the Industrial Property Internet Exchange (<http://exchange.iii.ua/uk>) is designed to promote registered inventions, trademarks and other industrial property rights on the market, to seek actively potential partners, investors and to place orders from the industrial economic sector.

The main goal of the Factory of Ideas resource (<http://fabrikaidei.iii.ua/>) is to identify, support and promote development of gifted and creative school, college and university students, young scientists, inventors and researchers.

The said online resources provide users with necessary information about partners and investors, relevant grants, competitions, conferences, and research programmes. Educational information was also disseminated through relevant information resources: Facebook, Instagram and YouTube.

6. 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 the Office, recognised in 2003 by the law as the Centre of International Exchange of Publications in accordance with 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 2022, in the framework of international exchange of patent documentation, the Office received current foreign patent documentation on optical carriers from 2 foreign offices (China and Japan). It should be noted, that the decrease tendency retained in the number of discs with foreign patent documents received by the Office, which is related, on

the one hand, to quarantine restrictions during the pandemic and in connection with the full-scale invasion of Russian Federation to Ukraine, and on the other hand, with the termination by some foreign offices of traditional types of publication of patent documentation on tangible media and the transition to free international exchange of patent documentation on intangible media, namely by providing access to it via the Internet and spreading data exchange, mainly through FTP-servers of the offices.

Thus, in 2022, the Office uploaded patent documentation from the intellectual property offices of Austria, the United Kingdom, and Canada to the Search Portal from FTP-servers.

As part of the ongoing cooperation with the EPO on data exchange aimed at providing representation of retrospective and current Ukrainian patent documentation in the EPO's Internet resource Espacenet, and to fulfill Ukraine's commitments under the relevant Agreement on access to the EPO's EPOQUE Net search system, in the reporting year, under the defined procedure, the national patent documentation was uploaded to the FTP-server of EPO.

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

In 2022, the Office continued international cooperation in the field of intellectual property with WIPO, the EPO and intellectual property offices of other countries.

Representatives of the Office participated in the work of WIPO Task Forces (including online), preparation of relevant proposals and information on Ukraine (if necessary) at sessions and meetings of WIPO Committees and Working Groups (online), in particular, in the work of the Task Forces (TF) of the Committee on WIPO Standards (CWS) on the development of new WIPO Standards, their updates, as well as other CWS projects:

- Committee of Experts of the Locarno Union: Fifteenth Session, January 24-28, 2022;
- Special Union for the International Patent Classification (IPC Union) Committee of Experts: Fifty-Third Session February 24-25, 2022;
- Nice Union - Committee of Experts: Thirty-Second Session, April 25-29, 2022;
- Quality Subgroup of the Meeting of International Authorities under the PCT: Twelfth Meeting, and PCT Union - Meeting of International Authorities under the Patent Cooperation Treaty (PCT): Twenty-Ninth Session (PCT/MIA), June 16-17, 2022 and June 20-22, 2022;
- Program and Budget Committee: Thirty-Fourth Session, June 27- July 1, 2022.

- Assistance to developing countries

- Other activities

- 7. OTHER RELATED MATTERS

The Quality Management System (QMS) is introduced at the Office according to the requirements of the ISO 9001:2015 international standard. The Coordination Council on Development, Implementation and Maintenance of the QMS / The Coordination Council operates on matters of the QMS development, implementation and maintenance, the designated persons for the implementation and maintenance of the QMS in structural units have been appointed, and the necessary documented procedures have been identified and developed. Management and the Chief Commissioner are responsible for the development and implementation of the Quality Policy. In order to determine the effectiveness of the QMS, measurable goals have been developed with the identification of departments and/or

managers responsible for achieving them, and an internal QMS audit programme has been approved. The results of the internal audits are discussed and analysed at the Coordination Council meeting, and the conclusions are submitted to the management for consideration and appropriate decisions aimed at improving quality performance. The QMS and the level of goals achievement are analysed twice a year. The final document of the management's analysis is a report on the functioning of the QMS, on the basis of which the management elaborates plans for the development of the QMS, makes decisions on changes and/or improvements to the QMS, and allocates the necessary resources for the QMS functioning. The specialists are given the opportunity to quickly review the necessary documents and the results of the QMS functioning through orders or instructions sent to structural units, as well as during working meetings in the units. Ongoing quality control was carried out at the level of chief expert supervisors and heads of sectoral examination units. Selective control is carried out at the level of the head of the examination unit, his/her deputy, as well as the Quality Control and Improvement Department for Examination of Applications (Quality Control Department). Each examination unit is responsible for the quality of examination in particular area. The quality assurance system includes cross-checking by leading experts and quality checks by department heads, the quality control department and the head of the examination unit. An internal quality assurance system has been implemented and is constantly maintained. According to this system, a unified approach to examination and searches must be followed in all sectoral examination units. For this purpose, appropriate control was carried out at the management level of the Quality Control and Improvement of Examination of Applications Department.

To ensure the quality of examination and searches, all examiners were provided online access to the PCT Treaty, the PCT Regulations and the PCT Administrative Instructions, relevant WIPO standards and all relevant regulations and instructions.