

Patent Cooperation Treaty (PCT) Committee for Technical Cooperation

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EXTENSION OF APPOINTMENT OF THE ISRAEL PATENT OFFICE AS AN INTERNATIONAL SEARCHING AND PRELIMINARY EXAMINING AUTHORITY UNDER THE PCT

Document prepared by the International Bureau

1. All of the existing International Authorities were appointed by the PCT Assembly for a period ending on December 31, 2017. In 2017, the Assembly will therefore need to make a decision on the extension of the appointment of each existing International Authority that wishes to seek an extension of its appointment, having first sought the advice of this Committee (see PCT Articles 16(3)(e) and 32(3)). Information concerning this process and the role of the Committee is set out in document PCT/CTC/30/INF/1.
2. On March 5, 2017, the Israel Patent Office submitted its application to extend its appointment as an International Searching Authority and International Preliminary Examining Authority under the PCT. This application is reproduced in the Annex to this document.
3. *The Committee is invited to give its advice on this matter.*

[Annex follows]

APPLICATION OF THE ISRAEL PATENT OFFICE FOR EXTENSION OF APPOINTMENT
AS AN INTERNATIONAL SEARCHING AND
PRELIMINARY EXAMINING AUTHORITY UNDER THE PCT

1. GENERAL

The Israel Patent Office (ILPO) intends to apply to the forty-ninth session of the Assembly of the International Patent Cooperation Union for the extension of its existing appointment as an International Searching and Preliminary Examining Authority under the PCT (“International Authority”) and invites the Committee to give positive advice to the PCT Assembly in that regard.

ILPO provided a draft of this submission to the International Bureau for their assessment and comments which were gratefully taken into consideration.

1.1. About the Israel Patent Office (ILPO)

1.1.1. The ILPO as an International Authority

The ILPO has been fully operative as an International Searching and Preliminary Examining Authority (ISA/IPEA) as of June 1, 2012, following its appointment in October 2009. While Israeli PCT applicants are free to designate either of the ILPO, USPTO or EPO as their ISA/IPEA, since the start of its operation as an International Authority, the ILPO has seen a constant rise in the amount of PCT filings designating the ILPO as an ISA/IPEA¹. Since start of these operations, the ILPO has established international reports (International Search Reports (ISRs), International Preliminary Reports on Patentability (IPRPs) and Written Opinions in Chapter I and Chapter II of the PCT) for more than 4,500 international applications. The services of the ILPO, in its capacity as an ISA/IPEA, were initially provided only to Israeli applicants and at a later stage also to US and Georgian applicants. While the number of applications designating the ILPO as ISA/IPEA is on a constant rise on the whole the ILPO succeeds to provide the international work products within the PCT timeframes. The high satisfaction scores in feedback surveys provided by PCT applicants and the high reuse rate of ISA/IL citations in the national phase entries indicate the high quality of the services provided by the ILPO in its capacity as ISA/IPEA.

The increasing trend in the percentage of international applications designating the ILPO as ISA/IPEA has been accompanied by a corresponding increasing number of PCT filings at the Receiving Office of the ILPO (RO/IL) (from 967 filings in 2012 to 1429 filings in 2016). In this regard, it is well worth noting that the RO/IL, which is part of the ILPO PCT Department, was ranked the first in the world, for the years 2013-2015, with respect to timeliness in handling PCT applications. The high-quality services of the RO/IL arise from the extensive experience it has gained throughout all the years Israel has been a Contracting State of the PCT since June 1, 1996. The ILPO ISA/IPEA services are provided by the PCT Department, which is responsible for the formalities examination of international applications, and the Patents Department, which is responsible for the substantive examination of international as well as national applications. A modern and advanced automated information system and a quality management system (QMS) which comply with international standards enable meeting the high standards required by the PCT and its users.

¹ From 48% of PCT applications filed by Israelis in 2012 to 64% in 2016.

1.1.2. The ILPO as a National Office

The ILPO has been providing industrial intellectual property services since 1921 under the British Mandate. In 1948, the ILPO was established as a governmental unit within the Israel Ministry of Justice and evolved to its current capacity as the regulator and service provider responsible for examination, registration and grant of patents, designs, trademarks and appellations of origin.

Since 2006, the ILPO has been operating as an Executive Agency - a model directed at obtaining greater managerial, human-resources and operational flexibilities.

The units constituting the ILPO include the Patents Department (responsible for the substantive examination of national as well as PCT applications) which is supported by an administrative unit, the Trademarks and Appellations of Origin Department, Designs Department and a PCT Department. All ILPO operations are supported by its legal department. Currently the ILPO has 200 employees.

These departments are fully task-based coordinated and operate in a paperless work environment under ISO 9001 compliance requirements.

The ILPO aims to provide modern user-oriented, high-quality and timely services. The ILPO aims at the achievement of the following standards:

- ✓ Maintaining maximum transparency to its stakeholders in terms of procedures, operations and challenges;
- ✓ Constantly improving services offered to the users and enhancing communication with the public and all PCT stakeholders; and
- ✓ Creating a better platform for collaboration in IP related issues and increasing the use and awareness of IP nationally and internationally.

1.2 IP system in Israel

1.2.1. IP framework in Israel

Israel has a well-functioning IP system which is under constant change and adaptation².

The Israeli judicial system is an adversary generalist system. IP infringement suits are filed to the Israeli District Courts. The issue of validity of a registration can be raised by the defendant and can be heard by the court of law which in turn may divert the matter to the decision of the Commissioner. Appeals on the District Courts' rulings may be filed by leave to the Supreme Court.

In addition to the examination and registration process at the ILPO, the Commissioner of Patents, Designs and Trademarks holds judicial powers according to the respective Laws and Ordinances which complete and correspond to the administrative examination process. Pre-grant opposition proceedings in patents and trademarks and cancellation proceedings in patents, designs and trademarks are held at the ILPO. The Commissioner also presides in ex-parte appeals on examiner decisions. Decisions issued by the Commissioner can be appealed at the District Court.

Israel has also a well-organized enforcement system concerning copyrights. The Copyright Law 2007 ascertains criminal liability³ for various offences under the law, regarding willful infringement of copyright in a commercial context.

² The IP legislation in Israel has significantly developed, following 3 amendments to the Israel Patents Law and a new Designs Law (replacing the Patents and Designs Ordinance) that is expected to take effect in 2018.

1.2.2. Israel as a Contracting State of international IP treaties

In order to extend and improve the services provided by the ILPO to IP users and to be an active partner of the international community in the IP system, Israel has joined various International IP treaties⁴, such as: the Paris Convention, the PCT, the Strasbourg Agreement concerning the International Patent Classification, the World Trade Organization (WTO) - Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement), the Budapest Treaty concerning the recognition of the deposit of microorganisms for patent procedure purposes, the Madrid Agreement and the Madrid Protocol, Lisbon Agreement concerning appellations of origin. Next year, Israel is intending to join The Hague Agreement concerning the international registration of industrial designs.

1.3 Israel as a hub of Innovation

1.3.1. Israel IP-related economical aspects

Israel has an innovation-motivated economy, a world leader in high-tech and bio-tech industries. Israel is a developed country and an OECD member, with the 34th-largest economy in the world by nominal gross domestic product as of 2015⁵.

Israel is ranked 24th in the Global Competitiveness Index published by the World Economic Forum for the 2016-2017 period⁶; 18th among 188 nations in 2015 on the UN's Human

Development Index⁷, which places it in the category of "Very Highly Developed"; and the 21st competitive economy according to IMD World Competitiveness Ranking for 2016⁸.

GDP per capita and estimated national R&D expenditure (% of GDP):

The Gross Domestic Product (GDP) in Israel was worth 299.4 billion US dollars in 2015⁹. The GDP value of Israel represents 0.48 per cent of the world economy.

The GDP per capita in Israel was last recorded at 36,575.9 US dollars in 2015¹⁰ and the research and development expenditure (per cent of GDP) in Israel was last measured at 4.11 per cent in 2014¹¹, according to the World Bank.

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³ The penalty for importing or creating infringing copies of protected works, for commercial purposes is up to 5 years imprisonment and a fine of up to approximately \$500,000. Distribution of infringing copies, as well as possession for commercial purposes, are punishable by up to 3 years imprisonment and a fine of up to \$350,000. Courts have sentenced copyright infringers, specifically recidivists to various imprisonment terms, some were arrested pending trial.

⁴ <http://www.wipo.int/wipolex/en/profile.jsp?code=IL>

⁵ <http://databank.worldbank.org/data/download/GDP.pdf>

⁶ <http://reports.weforum.org/global-competitiveness-index/results-overview-and-main-findings/>

⁷ <http://hdr.undp.org/en/content/human-development-index-hdi> (the date of 2015 appear in the Excel file: http://hdr.undp.org/sites/default/files/2015_statistical_annex_tables_all.xls).

⁸ <http://www.imd.org/uupload/imd.website/wcc/scoreboard.pdf>

⁹ <http://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=IL>

¹⁰ <http://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD?locations=IL>

¹¹ <http://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS?locations=IL>

1.3.2. Innovation in Israel

Intellectual property, along with innovation and creativity are the staples of the global knowledge-based 21st century economy and are important factors in stimulating economic growth worldwide. Israel stands at the forefront of and focuses on technological development and advancement, a position maintained with pride for many years. In this regard, Israel has been a huge potential for boosting innovation and promoting research and development (R&D) and this is clearly evidenced by the relevant data provided by the Global Innovation Index (GII)¹² and also by the Bloomberg Innovation Index¹³. According to the Bloomberg Innovation Index, Israel has been ranked the 10th most innovative economy in the world, occupying the top rank in the number of researchers per capita, the second rank in R&D investment per GDP, the third rank in high-tech density and the fourth rank in education.

1.3.3. Research universities in Israel:

Israel has 9 universities and about 60 higher-education colleges and polytechnics¹⁴. Israeli universities ranked among the 100 top world universities in mathematics (The Hebrew University of Jerusalem, Tel Aviv University - TAU and Israel Institute of Technology - Technion), physics (TAU, Hebrew University and Weizmann Institute of Science), chemistry (Technion and Weizmann Institute of Science), computer science (Weizmann Institute of Science, Technion, Hebrew University, TAU and Bar Ilan University) and economics (Hebrew University and TAU). Israeli researchers were awarded six Nobel Prizes since 2002. Israel has been frequently ranked as one of the countries with the highest ratios of scientific papers per capita in the world. Israel has led the world in stem-cell research papers per capita since 2000.

Local academia established 16 technology transfer companies¹⁵ which are affiliated with the country's renowned universities, research institutions and medical centers. The technology transfer models set out by these organizations are globally renowned. These organizations are the leading PCT applicants in Israel¹⁶.

1.3.4. Hi-tech in Israel

The strong educational infrastructure and high quality government-administrated national programs, such as Technological Incubators Program for transferring innovative technological ideas into viable startup companies¹⁷, promoted the creation of a high concentration of high-tech industries across the country which are backed by a robust venture capital infra-structure. Its central high technology hub, dubbed "Silicon Wadi", is considered the second in importance to its Silicon Valley Californian counterpart.

In 2016, the Israeli high-tech showed exits amounting at 10 billion United States dollars¹⁸ while venture capital fundraising activity reached an aggregate total of 1.4 billion dollars¹⁹. Most of Israel's manufacturing exports are based on high-technology products.²⁰

¹² According to the Global Innovation Index (GII) [<https://www.globalinnovationindex.org>], Israel has been ranked within the range 14th – 22th for the years 2013-2016.

¹³ <https://www.bloomberg.com/news/articles/2017-01-17/sweden-gains-south-korea-reigns-as-world-s-most-innovative-economies>; <https://www.bloomberg.com/graphics/2015-innovative-countries/>

¹⁴ http://lang.che.org.il/en/?page_id=15417

¹⁵ <http://www.iati.co.il/category/24/1/technology-transfer-offices-tto>

¹⁶ For more information about the leading PCT applicants, please see section 5 below.

¹⁷ The Technological Incubators Program was established in 1991 and is administrated by the Office of the Chief Scientist, Ministry of Industry, Trade & Labor (for more information please visit: <http://www.incubators.org.il/article.aspx?id=1703>)

¹⁸ <http://www.ivc-online.com/Research-Center/IVC-Publications/Exits-Report>

¹⁹ <http://www.ivc-online.com/Research-Center/IVC-Publications/VC-Fund-Reports/VC-Fund-Raising>

1.3.5. Regional location

Israel, officially known as the State of Israel, is located at the junction of three continents – Europe, Asia and Africa and is one of only two countries bordered by both the Mediterranean Sea and the Indian Ocean (via the Red Sea). Although Israel's total area is only 22,072 square km, it features a large variety of geographical regions. The presence of different climates in a small geographical area is significant: the range enables a rich and diverse agriculture as well as dramatic variety in the local flora and fauna. Israel is the host to approximately 2,380 different types of plant life, including about 160 varieties found exclusively in Israel.

1.3.6. Population

The population of Israel, as determined by the Israel Central Bureau of Statistics at the end of December 2016 was 8,630,800 people²¹.

Hebrew and Arabic are the two official languages in Israel. Additionally, over 80 per cent of the Israeli population are proficient in English, which is the common business language. Many Israelis are also proficient in Russian, French, Spanish, Amharic and other languages.

Israel is a parliamentary democracy. Israeli citizens vote for their party of choice in national elections, bestowing sovereignty on the Knesset, the Israeli parliament.

2. SUBSTANTIVE CRITERIA: MINIMUM REQUIREMENTS FOR APPOINTMENT

2.1 Search and Examination Capacity

Rules 36.1(i) and 63.1(i): The national Office or intergovernmental organization must have at least 100 full-time employees with sufficient technical qualifications to carry out searches and examinations.

Rules 36.1(iii) and 63.1(iii): That Office or organization must have a staff which is capable of searching and examining the required technical fields and which has the language facilities to understand at least those languages in which the minimum documentation referred to in Rule 34 is written or is translated.

2.1.1. Scope of search and examination

The ILPO, in its capacity as an ISA/IPEA, performs search and examination for all the technical fields to the most possible extent, including subject matter for which the ILPO is not required to perform search and examination under PCT Rules 39 and 67.1, such as methods for therapeutic treatment of the human body and methods of doing business.

Following the EPO's implementation of the "PCT Direct" service in November 2014, and in a step to improve the efficiency and quality of the examination of PCT applications, the ILPO launched a similar service in April 2015.

The ILPO, in its capacity as a National Office, performs accelerated examination for cases complying with Section 19a of Israel Patents Law. One of these cases is acceleration according to PPH (bilateral PPH, GPPH or PCT-PPH) arrangements. For applications approved for

[Footnote continued from previous page]

²⁰ http://www.cbs.gov.il/reader/cw_usr_view_SHTML?ID=461

²¹ http://www.cbs.gov.il/reader/?MIval=cw_usr_view_SHTML&ID=705

accelerated examination, a national search report, a search strategy report and an Office Action are established within 3 months from the applicant's reply to the requirement of supplying relevant prior art under Section 18 of Israel Patents Law.

2.1.2. Human Resources

The minimum qualifications set for patent examiner candidates include a Bachelor's degree in sciences, engineering or medicine and a strong command of Hebrew and English. A third language will add credit in favor of the candidate.

Each substantive examiner takes charge of performing classification of subject matter for the national and PCT applications, search, recording the search queries in a search strategy report, drafting an examination report (Office Action for national applications; written opinion for PCT applications) in which the objections under the relevant national or PCT statute are raised.

For each examiner, a predetermined annual goal (i.e., number of patent applications to be processed) is set, depending on her stage in the career path. In addition, the work done in each quarter is reflected in the incentive pay system.

In the substantive examination of PCT applications, the following examiners are involved:

- Substantive examiner, taking charge of the search and substantive examination as mentioned above;
- Optionally, an expert examiner, who works together with the substantive examiner, especially in cases involving multidisciplinary fields; and
- Team manager, as a quality control reviewer for the international reports of the ISA/IL (ISRs, written opinions, invitations to pay additional fees) as well as the IPEA/IL (IPRP-Chapter II, invitations to pay additional fees).

At the end of 2016 the ILPO has in its employment 116 full time substantive patent examiners at the Patents Department and is in the process of recruiting 20 additional substantive examiners by the end of 2018, according to its biannual work plan for 2017-2018. Patent examiners are employed directly by the State of Israel (i.e. Civil Servants) on a full-time basis and are wholly dedicated to patent search and examination.

The examiners have degrees in science, engineering, human and veterinary medicine. About 30 per cent of the patent examiners have more than 10 years of experience in their respective technical field. The majority of examiners hold Master's degrees and about 24 per cent hold a Ph.D. Examiners are further encouraged to participate in seminars and courses in their respective technological fields in order to maintain and update their competencies at a high level. Moreover, a large part of the examiners had been employed in the industry prior to their recruitment to the ILPO, thus further contributing to their professional competency and qualification as patent examiners in their relevant technical field.

The table below shows distribution of patent examiners according to the technical fields to which they are currently assigned.

Employees qualified to carry out search and examination:

Technical field	Number (in full-time equivalent)	Average experience as examiners (years)	Breakdown of qualifications Ph.D. degree: [P] Master's degree: [M] Bachelor's degree: [B]
Mechanical	28	5	11% P, 72% M, 17% B
Electrical/electronic	34	6	12% P, 73% M, 15% B
Chemistry	37	10	38% P, 62% M
Biotech	17	10	41% P, 59% M
<i>Total</i>	<i>116</i>	<i>7.62</i>	<i>24% P, 67% M, 9% B</i>

In 2015, the Patents Department underwent a significant organizational change, marked by completion of staffing the middle-management tier (team leaders) which was initiated in 2013. New professional and managerial capacities were set-out for the team leaders, including direct responsibility for the quality of search and examination.

Subject to specific requirements and limitations under national law, the Israeli practice in the searching and substantive examination of national patent applications corresponds closely to the PCT International Search and Preliminary Examination Guidelines for the processing of international applications.

Since the Patents Department undertakes the substantive examination of both national and PCT applications, the national applications concerning the same invention as that of the PCT applications, are usually allocated to the same examiner. This is intended to contribute to enhancing the efficiency of the substantive examination and to the harmonization of the examination practice at the ILPO with that of the PCT and other Offices' practices.

The administrative tasks of the ILPO in its capacity as an International Searching and Examining Authority are performed by the staff of the PCT Division. These tasks include processing all International Applications for which the ILPO serves as the ISA, processing Demands for International Preliminary Examination, mailing of notices and reports, monitoring timeliness and pendency of PCT search and examination reports by maintaining systems for tracking application status and workflow, as well as other administrative duties.

The PCT Division has highly skilled and qualified administrative personnel with extensive experience in fulfilling their duties under the PCT, comprising the Division Director, one clerk and 8 PCT formalities examiners responsible for PCT work in the Receiving Office, the ISA/IPEA and the designated/elected Office. All of the formalities examiners have at least a Bachelor's degree and the majority of them hold a Master's degree in sciences and engineering.

An internal Quality Manager was appointed in 2014 to take charge of the implementation and continuous improvement of the Quality Management System (QMS) of the ILPO according to ISO 9001:2015.

An internal Information and Databases Manager was appointed in 2013 to take charge of the support of the search databases available at the ILPO. His responsibilities include continuous training of the patent examiners; implementation of updates, new features and training courses provided by the database service suppliers; maintenance and troubleshooting.

2.1.3. Material resources

2.1.3.1. Automated system for processing national patent applications

The ILPO maintains a fully paperless work environment for the processing of national applications and a publicly accessible website for the e-filing of national patent applications and secure private access for the electronic correspondence and online payment; search and inspection of the patent file wrapper of published applications; and general information.

The upgraded internal patent information system (PARSIL) includes an extensive set of controls, checks and mechanisms to facilitate the processing and maintenance of patent applications and patents.

The ILPO has implemented the CPC system as part of its national classification system, in addition to the IPC and has started classifying national applications that have been first filed in Israel since September 2016. The internal automated system for processing national applications supports both IPC and CPC information.

The ILPO shares its national patent data with WIPO and EPO, which is published in Patentscope and Espacenet. In addition, the ILPO shares its national data in the WIPO CASE system as well as with a list of national patent offices which requested to do so.

2.1.3.2. Automated system for processing International patent applications

The ILPO has developed a modern and efficient PCT automation system, entitled PCT-SAPIA (System for Administration and Processing of International Applications) to create a paperless work environment in processing the International patent applications at the RO, ISA and IPEA stages.

This new system implements a large scope of automated validations (including fees) and a full set of automated, online, secure communications with the applicants and the International Bureau (IB) of WIPO through EDI.

The system includes a task list for the substantive, formalities and quality control examiners, and payment coordinator with built-in reminders to alert them about deadlines.

An automated information system applying Business Intelligence (BI) technology has been implemented for tracking and monitoring the timeliness of the different stages of international application processing.

The management of the ILPO has access to statistical tools for calculating the workload of each examiner and division, and monitoring fluctuations in demand and workload in a very transparent way.

As part of the ILPO's commitment to improve its services and maintain high-level user satisfaction, a PCT e-filing system has been launched on July 1, 2012, enabling applicants to file the international applications in electronic form and pay the relevant fees online.

In July 2016, the PCT e-filing system has been upgraded to allow secure account-based applicant/agent access (using a "smart card") to all the application-relevant documents (at the RO, ISA and IPEA stages) and allow post-filing of documents in electronic form.

The ILPO runs close automation cooperation programs with WIPO and leading Intellectual Property Offices in the world. Automation initiatives with WIPO include, *inter alia*, the PCT-EDI and eSearchCopy systems in addition to the aforementioned WIPO CASE system. As of July 20, 2016, the ILPO in its capacity as receiving Office (RO/IL) started to receive and process PCT applications filed using ePCT-Filing (in addition to PCT-SAFE software). The ILPO believes that such collaboration between WIPO and the ILPO emphasizes the trust and confidence in the ILPO's IT system.

In order to provide the public with the option to monitor the compliance with the quantitative restriction set for US applicants designating ILPO as their ISA, and in order to prevent the return of overflow applications, the ILPO developed a tool²² which shows the current number of PCT applications filed by US applicants and which were received at the ISA/IL for search. Using such tool would be advantageous to both the US applicants and Receiving Offices (RO/US and RO/IB). It enables instantaneous access to ISA/IL databases, keeping track of the 100 applications per quarter limitation, and collaboration and coordination amongst geographically dispersed Receiving Offices.

2.1.3.3. Technology and environment deployed by the ILPO

The ILPO patent examiners are equipped with workstations having access to the internal automated systems for examining national applications (PARSIL) and international applications (PCT-SAPIA), and to high-speed internet facilitating full intranet and internet accessibility. Each workstation is provided with two large computer monitors. This provides patent examiners with the necessary facilities to conduct their search and examination functions.

In an effort to improve the work efficiency and convenience, especially for examiners living outside Jerusalem, a teleworking project has been launched involving about 25 per cent of the examiners. This program was the first official teleworking pilot project by the Israel government service and has been proven successful.

The ILPO's intranet provides access to the national and PCT legal texts; Commissioner's Circulars and Notices; Examination Guidelines; links to databases and information sources covering legal, patent and non-patent information; internal instructions; Quality Manual; team meetings products (dates of the meetings and summary of the discussions and conclusions); training material; and advanced editing tools (OCR, splitting/merging documents, inserting pages, converting files to PDF, converting PDF files to MS Office documents).

The ILPO's Service Management implements the Information Technology Infrastructure Library (ITIL) Standard. The ILPO adopted a disaster recovery policy and has implemented a GeoCluster which protects the organization from equipment failures, power outages and natural disasters. The ILPO's Server hub operates on a very high data security level, using several firewalls and a strict government-based security system which provides protection and security in several aspects.

2.1.4. Training Programs

A Training Coordinator has been appointed to take charge of the training provided to the examiners. The training programs include lectures, seminars and courses related to the examination of national and international applications, search databases, scientific and legal aspects. Follow-up activities are implemented at the ILPO intranet including training information as well as tools for tracking trainee participation.

²² This tool is available on the ILPO website:
<http://www.justice.gov.il/En/Units/ILPO/Departments/PCT/Pages/PctDashboard.aspx>

The ILPO training system has been developed so as to allow the rapid recruitment and training of as many new examiners as demand requires. Newly recruited examiners start their patent examination career in a 24-month traineeship under the supervision and mentorship by senior patent examiners. Prior to starting the mentorship all trainees participate in an in-house basic frontal course that imparts a deep insight into the various legal and practical aspects in the processing of patent applications.

In 2016, a newly-structured training program for trainee patent examiners has been introduced. This program includes a 10-week incubator work-shop program, following the frontal course, and covering theoretical, practical and technical aspects that are related to the search and examination of patent applications. During this incubator program, the trainees are trained to perform search and examination on pre-selected samples and to draft national and international reports. Evaluation forms for the assessment of the trainee progress as well as feedback forms for the assessment of the effectiveness of the training have been established. Following this incubator program, the trainees continue the 24-month training program covering theoretical and practical aspects related to the search and examination, under the supervision of different senior examiners.

An examiner who has been authorized to work independently carries out searches and examinations of applications without strict supervision. However, work related to expedited examination, PCT applications and to cases including direct acceptance (without any prior Office Action) or refusal of grant, always requires the approval of the team manager as a QA stage.

All patent examiners are kept up-to-date as to relevant changes in patent related legislation, practice and procedures, on IP and technological developments. There are also regular training activities on advanced search databases. Every examiner is entitled to receive 3 personal training sessions a year in using the search databases.

Examiners are encouraged to participate in seminars and courses in their respective technological fields in order to maintain and update their competencies at a high level. Several professional courses have been held at the ILPO, provided by leading Israeli universities, private firms and experts, including courses in data telecommunications, engineering drawings reading and principles of pharmaceutical sciences.

The ILPO regularly organizes visits of the examiners to industrial firms and academic institutions in Israel. In these visits, tours and lectures are provided to the examiners and discussions are held with the representatives concerning the scientific, technological, and IP-related aspects in various advanced technical fields.

The ILPO encourages examiners to be enrolled in higher-education studies at Israeli universities, especially in the fields of sciences and law, which would improve their competencies.

2.1.5. Access to the minimum documentation for search purposes and Search systems:

Rules 36.1(ii) and 63.1(ii): That Office or organization must have in its possession, or have access to, at least the minimum documentation referred to in Rule 34, properly arranged for search purposes, on paper, in microform or stored on electronic media.

Continuous efforts have been made by the ILPO for improving the searching resources available for the examiners including increasing the number of subscriptions to the commercial databases as well as extending the search coverage within them. In addition, the ILPO has purchased licensed access to full-text non-patent literature collections.

In 2014, adequate communication infrastructure has been established to support joining the WIPO CASE system which serves as a global platform for sharing information between different patent offices in the world. The ILPO began using the system towards the end of 2014. It should be noted that the ILPO has been amongst the first offices in the world to join the system as an accessing as well as a depositing Office.

Five advanced commercial search databases have been made available for all the substantive examiners, in addition to the national collection that can be searched by the internal automated system for national applications (and also on the ILPO's internet website):

- Thomson Innovation providing access to core patent collections, Derwent World Patents Index (DWPI), Derwent Patent Citations Index (DPCI), Asian translated patent collections and scientific literature collections;
- STN (REGISTRY, CAPIus, MARPAT, BIOSIS, CABA, MEDLINE, EMBASE, FSTA, USGENE, DWPI, DCR, DGENE, INSPEC, COMPENDEX, ENCOMPLIT, TULSA, INPADOC, Patent Full Text, REAXYSFILE) providing access to patent and non-patent literature, chemical structure database, biological sequences database and full-text machine translations;
- EPOQUE Net providing access to patent and non-patent literature;
- Questel (FamPat) providing access to core patent collections as well as full-text machine translations; and
- PatBase providing access to core patent collections as well as full-text machine translations.

2.1.6. Languages in which national applications may be filed and processed:

Hebrew, Arabic and English

2.1.7. Other languages in which large numbers of examiners are proficient:

All examiners are fluent in English and Hebrew. Some examiners also have excellent knowledge of German, French, Russian, Ukrainian, Amharic, Spanish, Arabic, Italian, Romanian and Portuguese. A large number of examiners are able to work in a foreign language in addition in English.

2.1.8. Services available to assist search or understanding of prior art in other languages:

The commercial search databases available at the ILPO provide full-text translations as mentioned above. In addition, the examiners are aware of the free-access machine translation services such as those available in PatentScope, Espacenet, WIPO CASE and Global Dossier. The translation facilities available to the patent examiners allow them to understand and cite non-English publications in the ISRs.

2.2 Quality Management

Rules 36.1(iv) and 63.1(iv): That Office or organization must have in place a quality management system and internal review arrangements in accordance with the common rules of international search.

The QMS reports of the ILPO are available on the following WIPO website:
<http://www.wipo.int/pct/en/quality/authorities.html>

2.2.1. Quality assurance

Quality is of paramount importance to the ILPO. The ILPO has a Quality Management System (QMS) certified according to ISO 9001:2015. The certification covers all services offered by the ILPO, such as: processing of national patent applications, international applications under the Patent Cooperation Treaty (PCT), Industrial Designs and Trademarks applications.

The ILPO's QMS is annually assessed by the Standards Institution of Israel, which conducts external audits in order to extend the ILPO's certification to ISO:9001 standard.

The measures taken by the ILPO to institute a quality framework for the processing of national and international applications according to ISO 9001, have qualified the ILPO to fully meet the requirements of the Quality Framework set out in Chapter 21 of the PCT International Search and Preliminary Examination Guidelines.

The high-quality services of the ILPO qualified it to be bestowed the Civil Service Commission's Recognition Award as an Excellent Unit in Increasing Efficiency and Reducing Bureaucracy for the years 2010 and 2013.

The ILPO has been recently selected as one of the few governmental units to be a candidate for the prestigious National Quality Award. This award is bestowed by the prime minister of Israel in a State ceremony as recognition of excellence in the Quality Management System of the winning governmental unit. Being chosen as a candidate to this award indicates the remarkable measures taken by the ILPO to reach such a high level of quality among all government units.

2.2.2. Quality control

The ILPO has a quality control framework, covering both the substantive and formalities examinations in the processing of national and international patent, Industrial Design and Trademark applications.

Concerning the examination of international applications, The ILPO has set up an internal quality control system for 100 per cent of the international reports of the ISA/IL (ISRs, written opinions, invitations to pay additional fees) as well as the IPEA/IL (IPRP-Chapter II, invitations to pay additional fees), which includes full checking of the procedures during the search and examination, according to both substantive and formalities requirements.

The quality control system comprises the following stages:

1. Automatic quality checking by the automated system;
2. Self-checking by the examiner using a checklist which points out common mistakes;
3. Substantive Quality checking, by the respective team leader;
4. Formalities Quality checking, by the PCT department.

2.2.3. User feedback

As part of its commitment to quality and improvement, the QMS applies a number of methods to collect user's feedback including, *inter alia*, a comprehensive annual online external quality survey (covering all IP services provided by the ILPO) applied by an external company to provide feedback from users anonymously, internal quality survey from ILPO staff, meetings with IP representatives and direct feedback from users.

3. INTENDED SCOPE OF OPERATION

Language in which services is offered:

The ILPO offers its clients services in English.

State(s) or receiving Office(s) for which Authority would offer to be competent:

- Israel
- United States of America
- Georgia

The ILPO serves as an ISA/IPEA for international patent applications filed with the USPTO from October 2014. In October 2015, the ILPO extended the services provided to US applicants by increasing the maximum number of applications for which the ILPO acts as ISA/IPEA to 100 applications per quarter and extending the fields, in which the ILPO is ready to carry out search and examination, to include methods of doing business. An additional agreement was signed with the National Intellectual Property Center of Georgia, SAKPATENTI, on September 2014.

The ILPO is currently competent as an International Authority for international applications filed at the receiving Offices of or acting for Israel, Georgia and USA, but is open to concluding agreements to act for applications filed in the English language from additional other Offices.

Limitations on scope of operation:

The ILPO does not have any limits on scope of its operation. The ILPO provides search and examination services regardless of the technology

4. STATEMENT OF MOTIVATION – ILPO'S ROLE IN THE PCT SYSTEM

The rate of use of the PCT system by the Israeli public is one of the highest in the world per capita. Israeli patent applicants are among world leaders in filing international patent applications under the PCT. The Israel Receiving Office (RO/IL) is among the top 15 Offices in the world in terms of the number of international applications received under the PCT. The high number of PCT filings at the RO/IL, accumulated a wealth of experience during the two-decades since Israel became a Contracting State of the PCT on June 1, 1996. Furthermore, based on the WIPO's latest PCT statistics, Israel is ranked 17th (in 2015) in terms of the number of PCT national phase entries.

The operation of the ILPO as an ISA/IPEA, since June 1, 2012, has contributed to the further development of the PCT system as a whole by way of encouraging its use – as is evident by the increase in the number of PCT filings in Israel. This can be attributable to ILPO's PCT activities and major awareness-raising programs. The constant rise in the number of PCT filings electing the ILPO as ISA/IPEA indicates the high degree of trust in the ILPO as an International Searching and Examining Authority.

ILPO already shares the knowledge it has obtained from its successful operation as an International Authority with other member states in a range of activities: seminars to WIPO trainees, International cooperation, knowledge sharing and specifically sharing with other offices our experience in becoming an ISA/IPEA and carrying out the required duties as such. ILPO sees great value in continuing and expanding these work and experience sharing activities, thus further contributing to the effectiveness and improvement of the PCT system, upon reappointment.

The Israeli government has always considered the Patent Cooperation Treaty as an important major international tools within the international patent system and has highly appreciated the latest developments in the PCT system, notably the increasing efforts to improve the quality of international search and examination reports, to enhance mutual trust in PCT work products, to simplify the PCT system and to make it more attractive for applicants. Therefore, one of the priorities of the Israeli government in the IP field was to proceed forward with all the resources required to obtain the appointment of the ILPO as an International Authority for Searching and Preliminary Examination of international patent applications and now seeks its reappointment as such.

In order to improve work quality and efficiency and provide extended and advanced functionalities to meet the modern needs of the IP users, the ILPO has been continuously upgrading its internal automation systems and the electronic resources available to the users²³. The internal automation upgrade has been implemented in all the departments of the ILPO to create a modern paperless work environment which is more efficient and convenient. In addition, an electronic filing (e-filing) system has been established for all the departments of the ILPO, supporting all incoming and outgoing communications with applicants in electronic form. The PCT e-filing system has been highly favored by the applicants – e.g. approximately 99 per cent of the PCT applications in 2016 were filed online.

The ILPO has invested much in the search databases made available to the substantive patent examiners to provide a comprehensive coverage far beyond the minimum documentation requirement of the PCT²⁴. The examiners have been given access to the most advanced search databases, covering both patent and non-patent literature in all the technical fields, having machine translations and providing all the search tools required to perform a comprehensive search, including, *inter alia*, searching of chemical structures and biological sequences.

The ILPO views the timeliness and quality of its international work products as a strategic priority in its activities.

The high-quality services provided by the ILPO, in its capacity as an ISA/IPEA, has allowed the extension of the countries from which applicants may elect the ILPO as ISA/IPEA. At present as mentioned above, the ILPO acts as an ISA/IPEA for Israeli, US and Georgian applicants. In a later stage, subject to agreements with other Patent Offices, the Israel Patent Office expects to be able to handle also applications of other foreign applicants. ILPO sees such services as an indication of the technological advancement of the local economy.

The ILPO has been among the first ISAs to provide search strategy reports, together with the ISRs, for PCT applications, since April 2013.

The ILPO considers the PCT system as a tool for identifying efficiencies and using them to promote the global as well as the national patent system. Thus, in the footsteps of the EPO's implementation of the "PCT Direct", the ILPO has launched such a service in April 2015 as the second International Authority after the EPO.

Israel plays an active role in patent-related cooperation aimed at work-sharing and harmonization of search and examination. The PPH and GPPH systems are one such example. The ILPO has bilateral PPH and PCT-PPH agreements with USA, Japan, China, EPO, Finland, Denmark and Spain. In the beginning of 2014, the ILPO was amongst the

²³ For more information, please see "Material resources" in section 2.1.3 above.

²⁴ For more information, please see "Access to the minimum documentation ..." in section 2.1.5 above.

initiators of a pilot cooperation within the framework of the GPPH (Global Patent Prosecution Highway) arrangement.

The recent trend towards establishing closer links between the PCT system and the various PPH programs, enabling applicants to request PPH acceleration of their international applications after national phase entry on the basis of the international work products, assists in reducing costs, workload and unnecessary duplication of work, and contribute to the quality of granted patents.

The ILPO has implemented the CPC system as part of its national classification system, in addition to the IPC, and has started classifying national applications that have been first filed in Israel since September 2016. The ILPO also encourages examiners to use CPC in performing prior art search for national and international patent applications. The ILPO intends to include CPC classification information, in addition to IPC information, in its international reports by the end of 2018.

In terms of advantages to the PCT system as a whole, reappointment of the ILPO as an ISA/IPEA will serve to alleviate the increased international PCT workload most ISAs/IPEAs are facing. This workload has created backlogs both in number and application pending time, and in turn has caused a degree of legal uncertainty, resulting in difficulties for stakeholders in making business, investment or technological decisions.

The ILPO is a constant contributor to international professional meetings. The active participation of the ILPO in all instances of the PCT system, especially in the Meetings of International Authorities and the Quality Subgroup meetings (which were hosted in Israel in 2014) and in other international initiatives and projects aimed at work-sharing, quality improvement and harmonization of the patent system, shows a proven track record of the ability to be an effective contributor to improving the efficiencies and quality of the PCT system.

ILPO believes this submission satisfies that the ILPO meets all the technical requirements to offer its high-quality search and examination services to the PCT users. Furthermore, the above shows the ILPO commitment to exchanges of information and the promotion of best practices of the International Authorities as part of the over-all PCT member states' support of the continuous improvement of the PCT system as a whole for all Contracting States. We believe that by extending the ILPO's appointment, Israel will be able to further promote wider use of the PCT system, particularly in Israel but also worldwide.

5. PROFILE OF PATENT APPLICATIONS

Number of national applications received – by technical field

Year	2016	2015	2014	2013	2012
Technical Field					
Mechanical	726	644	626	640	656
Electrical/electronic	2,306	2,498	2,432	2,234	2,202
Chemistry	2,094	2,123	1,968	1,966	2,202
Biotech	1,293	1,262	1,142	1,122	1,200
Total	6,419	6,527	6,168	5,962	6,651

Number of national applications received – by route

Year \ Route	2016	2015	2014	2013	2012
National first filing/internal priority	734	542	740	798	804
Paris priority	320	188	313	233	339
PCT national phase entry	5,365	5,797	5,115	5,001	5,508

Number of international applications received as RO – by year of publication²⁵

Year \ Technical Field	2016	2015	2014	2013	2012
Mechanical	320	327	315	283	263
Electrical/electronic	722	694	670	584	531
Chemistry	225	171	171	166	175
Biotech	80	81	61	77	90
<i>Total</i>	<i>1,347</i>	<i>1,273</i>	<i>1,217</i>	<i>1,110</i>	<i>1,059</i>

Average time taken for national patent processing

Indicator	Measured from	Time (months)
To search	Not relevant	Not relevant
To first examination	From submission date	28.5
To grant	From first examination	23.5

National workload

Currently, the ILPO's workload was 16,892 applications at the end of December 2016, covering all technological fields. The gradual increase in the number of patent examiners and the new automation system mentioned above have already resulted in a positive impact on production and, consequently, will resolve this situation in the short term.

Furthermore, the ILPO undergoes the scrutiny of the Executive Agency's Control and Productivity Committee, which is a governmental committee responsible for setting and verifying adherence to work-related goals in the ILPO. This committee reviews the ILPO at least annually, after which a report is issued and recommendations are implemented. To date, not only that the ILPO has been constantly meeting its goals, but currently it has exceeded them. Consequently, the ILPO's backlogs have been decreasing now for by several years.

At the end of 2016, average first examination pendency stood at 28.5 months. Continued examination pendency stood at 4.5 months. Further improvement is expected due to the recruitment of 20 examiners in years 2017 – 2018.

After thorough consideration, the ILPO officials came to the conclusion that offering its services as an ISA/IPEA would not prejudice the ILPO's ability to reduce the national application backlog.

It should be noted that applicants and residents of Israel will nevertheless retain the prerogative of selecting either the USPTO or the EPO as an ISA/IPEA, besides the ILPO.

²⁵ Source: WIPO statistics database. Last updated: January 2017
(<http://ipstats.wipo.int/ipstatv2/pmindex.htm?tab=pct>)

Measure	Number of applications
All pending applications	16,892
Applications awaiting search (where relevant fees paid)	Not relevant
Applications awaiting first examination (where relevant fees paid)	16,892

6. INTERNATIONAL COOPERATION ACTIVITIES OF THE ILPO

In order to promote international work sharing, the ILPO has signed PPH & PCT PPH arrangements with a number of Patent Offices. In addition, as of January 6, 2014, the ILPO is part of the Global PPH arrangement. These arrangements have contributed to improving the efficiency, cost-effectiveness and quality of patent examination.

In February 2014, the ILPO hosted the 21st MIA Meeting. Approximately 50 senior officials from WIPO and 18 global leading patent offices participated.

The ILPO has held through the years many cooperations with WIPO. Some such activities are the Roving Seminars carried out in 2015. A long standing cooperation is an in-house one-week Training Course on Patent Search and Examination, organized by WIPO in cooperation with the ILPO, which is held at the ILPO for foreign participants from the WIPO Academy and other Offices. The course includes lectures and workshops related to the examination practice at the ILPO, with emphasis on the pharmaceutical field, as well as visits to the industry and academic institutions. The course provides insight into the patent legal and professional issues and allows professional discussions and information exchange between the participants and the ILPO examiners. The Training Course In 2017 will focus on patent search and examination in the information and communication technologies (ICT), and as done previously, representatives from other patent offices have been invited directly by the ILPO to attend it.

The ILPO holds many cooperations with various IP national offices by way of mutual visits and examiner exchange programs as well as information exchange (such as with SIPO, USPTO, CIPO, EPO). Some such activities are Bi-annual public information sessions are held in Israel together with the USPTO to promote the use of the PPH and EPO examiners visit Israel on a regular basis and hold professional information sessions with ILPO examiners.

7. CONCLUSION

From all of the above the ILPO believes it has demonstrated its capability to fully meet all the requirements to continue to function as an ISA/IPEA under the PCT and deems the extension of its appointment necessary, on the basis of the following main attributes:

- A highly qualified, dynamic, competent, motivated and growing staff of patent examiners in all the technical fields, possessing bilingual, often multilingual capabilities;
- A well-organized training system for the ongoing training of all examiners in all aspects related to search and examination of patent applications as well as enriching and keeping them up-to-date with scientific and professional knowledge;
- Timely handling of the workload and compliance with government-predetermined targets;
- An advanced, efficient and modern automated system, which provides full electronic filing and communications, task-based paperless processing of national and international patent applications, and flexibility to implement improvements upon need;

- Advanced search databases, in all the technical fields in patent and non-patent literature, providing a coverage far beyond the PCT minimum documentation requirements; Well-established quality management system complying with ISO 9001:2015 and internal review arrangements;
- Readiness and flexibility to adopt procedural and automation changes and initiatives for improving the PCT with nominal if not no support from WIPO or other International Authorities and Member States while having the ability to support others;
- Openness to international cooperation (such as work sharing, information exchange, participation in international discussions);
- An organizational commitment to the pursuit of excellence in user relations, user feedback collection and service delivery, while continuously reducing the regulatory burden upon the public at large by supporting the robustness of the national and international patent system.

A proved successful track-record in providing ISA/IPEA services in constantly growing numbers with extremely positive feed-back from stakeholders and other colleague offices as to timeliness and quality.

[End of Annex and of document]