



IP Friends Connections

This Magazine is published as part of the Intellectual Property Cooperation in Human Resource Development Program of the Japan Patent Office. The aim of this Magazine is to follow up on training programs through the dissemination of information to IP Friends, those who have completed training courses of the above program. We very much hope that the information in this publication related to intellectual property, and the comments from either IP Friends or lectures, will prove beneficial to you in your work.

JAPAN PATENT OFFICE

【The meaning of 縁 (Enishi)】

"Enishi" refers to the bond created between people when encountering someone they were destined to meet. We have chosen this term as the title for our publication because we are all members of the Intellectual Property community, and the bonds created between us extend beyond national borders. We hope that you will use this informative publication to deepen the "Enishi" you have created with your IP Friends.

Table of Contents

1. FY 2016 Follow up Seminar in Thailand

2. Training course experience in Japan

2-1. "My Experience of Training Course in Japan"

Ms. Anamika Srivastava (India)

2-2. "First Visit to Japan in 2015"

Ms. Garima Rai (India)

2-3. "Impact of JPO/IPR Patent Expert Training for Unlocking the Potential Developing Countries"

Mr. Ritesh Agrawal, (India)

3. Introduction of FY 2016 Long Term Fellowship Researchers

4. Contributions from FY 2015 Long Term Fellowship Researchers "Japan in my heart"

Ms. Trinh Thu Hai (Viet Nam)

5. Articles from the former trainees

- 5-1 "Intellectual Property in Brazil:
 - A Challenge to overcome JPO/IPR COURSES: A motivating solution"

Ms. Sibelle de Andrade Silva (Brazil)

5-2 "Intellectual Property Situation in India: A Prolegomenon"

Mr. Ashwini Siwal (India)

5-3 "IP situation in Peru"

Mr. Pablo Cesar Trelles Dellisanti (Peru)

6. Messages from Committee of Human Resource Development & Lecturers

Mr. Mitsuhiro TAKASAKI, President. ENGINEER INC.

7. Column: "The "Curse" is Pressure"

Mr. Takao OGIYA, Director General of APIC

- 8. Selection from TOP 100 Japanese Innovations of "Automatic Ticket Gate System"
- 9. Happenings in Japan (Four-Flame Cartoon)
- **10. Editor's Note**

FY 2016 Follow up Seminar in Thailand

On October 26 and 27, 2016, a follow-up seminar was held in Bangkok, Thailand. The seminar was organized by the Japan Patent Office (JPO) and Department of Intellectual Property, Thailand (DIP), conducted by Asia-Pacific Industrial Property Center of Japan Institute for Promoting Invention and Innovation (APIC-JIPII) and Intellectual Property Promotion Association of Thailand (IPPAT). This was the thirteenth seminar to be held in Thailand since 2000.

The seminar was attended by 217 people during two days. The attendees were mainly DIP employees and people from universities, research institutes, and law firms, but they also included people from private-sector companies and IP alumni from Thailand.

The theme of the seminar was "Role of Human Resource Development for Intellectual Property Sectors," and began with opening remarks from Mrs. Auramon Supthaweethum, Deputy Director General of DIP, Mr. Kazuyuki Miura, Director of the International Cooperation Division, JPO and Mr. Chayatawatch Atibaedya, President of IPPAT on the first day.

After that, Mrs. Auramon Supthaweethum gave the keynote speech, which was entitled "Current Status of Intellectual Property Policy in Thailand." This was followed by another keynote speech by Mr. Kazuyuki Miura, the title of which was "Current Situation of Industrial Property Policy in Japan," and by special speech by Mr. Motoki Takada, Director of Intellectual Property, JETRO Bangkok, the title of which was "International Cooperation on IP with Thailand and ASEAN countries."

After that, IP experts both in Japan and Thailand delivered lectures on four topics over two days: "Development of IP Human Resource in Public Sectors" and "Development of IP Human Resource in Private Sectors" on the first day, and "Development of IP Human Resource in R&D Sectors" and "Development of IP Human Resource in IP Law Enforcement" on the second day.

The delegates from Japan also delivered lectures: Mr. Minoru Torii, Dean & Senior Managing Director for Human Resources Development and Utilization, National Center for Industrial Property Information and Training (INPIT), under the title of "Development and Role of IP Human Resources in Japanese Government;" Mr. Takao Ogiya, Director General of APIC-JIPII, "Role and Development of IP Human Resources in Japanese Private Company"; Mr. Kenichi Hatori, Project Professor, Graduate School of Science and Technology, Keio University, "Development and Role of IP Human Resources in Japan's University and Research Institute"; and Mr. Chikashi Tamura, Patent Attorney, and Director General of Training Institute of Japan Patent Attorney Association (JPAA), "Development and Role of IP Human Resources in Legal Service and Enforcement Sectors."

In response to these lectures, the following delegates from Thailand delivered lectures: Dr. Kommate Chitwanichphiboon, Innovation System Director, National Science Technology and Innovation Policy Office (STI), Mr. Yingyong Tanthanapongphan, Intellectual Property Manager, Corporate Technology Office, The Siam Cement Public Company Limited, Prof. Dr. Sansanee Chairoj, Vice Rector, Mahidol University, and Mr. Nandana Indananda, Partner, Tilleke & Gibbins. Participants listened intently to each lecture and asked the lecturers many questions. This demonstrated a high level of awareness in intellectual property.

This seminar was held in mourning period of King Bhumibol of Thailand. There are many

1

events for mourning their King. The Ministry of Commerce of Thailand also organized an event, "Royal Creativity for All," as one of mourning events for King Bhumibol who made some invention as an inventor from October 28 to November 6. We would like to send our deep condolences to all the Thai people and would express our sincere gratitude that they gave opportunity to hold the seminar this time despite of their deep sorrow.

The DIP has entrusted to train new hired examiner at the DIP to the JPO this October. The DIP is focusing on human resource development not only for the personnel of the DIP but also IP related people in their respective country. We, APIC, would like to continue to support their capacity building under the direction of the JPO.



(From 5th person from left) Mr. Takao Ogiya of APIC-JIPII, Mr. Chikashi Tamura of JPAA, Prof. Kenichi Hatori of Keio University, Mr. Kazuyuki Miura of the JPO, Mr. Chayatawatche Atibaedya of IPPAT, Mr. Minoru Torii of INPIT, (The right end) Mr. Nandana Indananda of Tillede and Gibbins, (the 3rd person from right) Mr. Motoki Takada of JETRO Bangkok Office



Opening remarks: Mr. Kazuyuki Miura of the JPO and Mrs. Auramon Supthaweethum, Deputy Director General of DIP



Scene at the venue

Training course experience in Japan

My Experience of Training Course in Japan



Ms. Anamika Srivastava (India) Remfry & Sagar (Attorneys-at-law) New Delhi NCR, India

(JPO/IPR Training Course for Practitioners Specializing in Trademark, Jul. 2-Jul. 15, 2015)

Konnichiwa!!

Taking a trip back down memory lane, I was fortunate enough to be selected for the two weeks Training Course (July 2, 2015 - July 15, 2015) for the Intellectual Property Trademark Practitioners (IPTP-2015) which specializes in trademarks law, organized by the Japan Patent Office (JPO) in association with Asia-Pacific Industrial Property Centre (APIC) along with Japan Institute for Promoting Invention and Innovation (JIPII).

The two wonderful weeks of my stay in Japan were an extremely enriching experience, both professionally and personally.

Keeping in line with the goals of the JPO to support innovation from a global perspective and contribute to building the global intellectual property system, this course was designed for individuals working in the field in the private sector (such as enterprises, law firms, research institutes and educational organisations) and those working in IP offices that are involved with the management and effective use of trademarks. The course has been designed to provide the participants with a deeper understanding of the IPR especially trademarks and techniques required for smooth utilization/enforcement of the IPR system.

It was an extremely well-organized and chartered course which had 30 participants from 11 countries: Cambodia, Colombia, India, Indonesia, Lao PDR, Malaysia, Philippines, Myanmar, Mexico, Vietnam and Thailand. The lectures that took place during the span of two weeks did not only impart deep insight in Japanese trademarks law/practices but also covered various aspects pertaining to trademarks practices in participating nations which included comparative studies in relation to trademark searches, filing, examination, protection and infringement as well as problems of imitation/counterfeit/parallel imports, etc. The knowledge imparted and skills gained from the lecturers have been extremely beneficial. We were provided with extensive study materials (which is referred to even today) and also frequently given assignments to be completed before the lectures. It certainly made us feel as if our college days were back and helped us understand the subject even better.

The first lecture of the course was an ideal beginning wherein the trademarks systems of the participating nations were discussed and understood under the guidance of Ms. Reiko Toyosaki of Toyosaki & Associates. This facilitated not only interaction amongst the participants but also laid a good base for further lectures to be carried out during the course.

I remember that the most debated and discussed issue during the course was regarding the implementation of the 'Madrid Protocol', as most of the participating nations had either recently acceded to the Protocol or were in the transition phase to accede to it. Accordingly, everyone felt a combination of zeal and anxiousness to learn from Japan's 15 years of experience in handling applications and registrations under the Madrid Protocol and also to understand the functioning of the said system at the various other IP offices (of the participating countries).

The visit to the JPO building and the Appeal Court Room in the same premises was a wonderful experience. Not to forget, the visit to Toshiba Corporation along with the Toshiba Science Museum located in Kawasaki (outskirts of Tokyo) was also a heartening experience.



There was a lot of emphasis on the bonding and networking amongst the participants. All the participants created a group on Facebook and we are still in touch with each other, which is an extension of the IP family the world over. We all still cherish the memories of our karaoke night at the HIDA centre.

After the classes, we would usually make a group and visit a range of places across Tokyo. My colleague and friend Ms. Snehal Nigam (co-participant from India) was part of all my ventures, which created a lifetime bond between us! I managed to tick off famous spots from my bucket list in Tokyo: Akihabara, Tokyo Tower, Tokyo Sky Tree, Ginza, Shibuya crossing, Asakusa Shrine, Roppongi, Imperial Palace garden, Ueno, Omotesandō and Odaiba. I thoroughly enjoyed my walks around the Tokyo streets with friends and still miss them.

I was fortunate enough to visit Fuji San and get a clear view of the peak on the day of my trip. It was an amazing experience to do boating on the lake Kawaguchiko, take the Kachi Kachi Ropeway and see the peak from the 5th Station of Mount Fuji followed by a traditional Japanese lunch!! The visit to Mt. Fuji was also my first ride on the much talked about Japanese bullet train, 'the shinkansen'. I still clearly remember the child-like excitement I felt before boarding the train.

On the last Saturday of the course, I made a day visit to Japan's beautiful historical city of Kyoto with other participants (again via the shinkansen!!). Although a very short trip, it was

4

a memorable one. The day trip organized by HIDA staff to the Great Buddha at Kamakura was a fun-filled activity.

My article would be incomplete without mention of the rich culture of Japan, the Japanese way of life, food, music and extremely helpful and cooperative people who were ever willing to help foreigners even if they could not understand the language. I have travelled to other parts of the world as well but have never come across such genuine, warm and nice people.

This was my first visit to Japan and the entire experience was so fulfilling and satisfying that I would love to visit the beautiful country yet again with family and friends!!

I would like to express my sincere thanks and gratitude towards the HIDA and APIC staff for making the journey from the beginning until the end, so very beautiful. I would like to make special mention of our coordinators Shibatasan, Shibuya-san and Homma-san who were instrumental in making the stay pleasant and meaningful.

In the end, I just wish to conclude by saying "arigatou gozaimasu" Japan!!



First Visit to Japan in 2015

Ms. Garima Rai (India) Global IP India



Ms. Garima Rai

(JPO/IPR Training Course for Practitioners Specializing in Patents, Aug. 24-Sep. 11, 2015)

It was a moment of immense happiness and pride when I was selected for the training course titled "JPO/IPR Training Course for Practitioners Specializing in Patents" organized by the Japan Patent Office in 2015. I was excited to attend the training course which I knew was going to be a vivid experience for me. I would like to share my journey to Japan and back to India.

On my way to Tokyo, when I boarded the flight, I had a mixed feeling of happiness and anxiety about my survival in an unknown land. But I was heading to the Land of Rising Sun and nothing could stop me from feeling the warmth of it. It was a Sunday and a sunny day. I was given a warm welcome and provided with a lot of documents and lots of information about Tokyo and Japan. My first impression about Japan was its super cleanliness and pollution-free atmosphere. The honesty, simplicity and humbleness of people living in Japan can be felt in the air of Japan.

Providing training to aspirants from across the globe is an appreciable initiative by the Japanese government and this brings people closer together as they get to know each other. I can proudly say that I have my IP friends across the globe.

There were 27 participants from 10 different countries in the course which I attended. This huge group of participants became a group of IP friends, sharing the cultures and the IP trends in their respective countries and providing sensible advice on various patent matters.

My first surfing of the city led me to the Tokyo Skytree at Asakusa, the traditional Tokyo. Viewing the city from such great height felt electric.





We were also given a welcome address by the Japan Patent Office (JPO) and we visited the JPO building at Kasumigaseki. We were given a demonstration about searching patent applications at J-PLATPAT. A demonstration about the court was provided and we were allowed to wear the Judge's gown to take pictures. A welcome party was organized by JPO, HIDA and APIC. It was a nice party and we got to know many Japanese Examiners working at the JPO. We got a chance to interact with many JPO personnel.

After the welcome party by JPO, in the evening, we visited Odaiba, a beautiful place. We also saw the "Statue of Liberty", the Rainbow Bridge, the Tokyo Deck and the beautiful bay of Tokyo. The view of Tokyo city from Odaiba is awesome from the Tokyo Deck.

On one of the weekends during my stay, I got a chance to enjoy the beautiful Brazilian Samba Festival at the traditional Tokyo area around Asakusa. It was a fabulous gathering and everyone seemed to be dancing to the beats of Samba.

The course was training for Patent Specialists and was for a period of 3 weeks. During this training phase, there were many vital and important lectures delivered by Professors from many universities and prominent patent attorneys from various renowned firms. The lectures contained substantial information and high quality deliverables were provided. The class was divided into groups and discussions were held among the members of each group and a final decision was delivered by each group.

Topics such as how innovation takes place in a university, how royalties are provided to the inventors who perform research work at university, how the industries approach the researchers for new inventions etc. were discussed. There were lectures focusing on the problems which inventors face when they research in a university and not an industry.

We were also educated regarding Examination Standards at the Japan Patent Office. Focus was given to the disclosure of inventions with respect to the description part of the specification. It was further discussed that what is claimed in the claims of the invention must be disclosed in the description. The scope of claims must lie within the scope of what has been described/disclosed in the specification. We were also given a lecture on patent drafting.

Additionally, we also got valuable lectures about the trade secrets and know-how of inventions. Discussions were held regarding different types of "Agreements" between an employer and employees. Non-disclosure agreements were also discussed during the session. Discussions were held about employees working on contract basis so that they are not allowed to leave the company before accomplishment of a project and do not disclose the know-how of the invention to another person/company. We also discussed about various types of patent infringements such as Direct and Indirect infringement. Explanations were given regarding the use of terms such as comprising, consisting of, in the transition of claims. There was an example of a pencil and a pencil with an eraser attached to an end of the pencil.

We also visited Kyoto, the city of temples. Kyoto is a peaceful and traditional city of Japan.

We visited the famous world heritage temple named Kinkakuji temple. Kyoto is famous for its temples and shrines. It felt holy and my mind and soul felt peaceful and relaxed.

In the midst of the training sessions, we were provided with an opportunity to visit HONDA's Saitama Factory. It was a fabulous experience for us to visit the huge Honda factory. We were given a brief introduction about Honda's IP Management and Counterfeit Measures taken by Honda against the infringement of its IP rights. A tour of the factory, YORII plant, was guided by Honda personnel. We were made acquainted with the making of Honda's cars, from scratch to the assembling of various parts.





There were huge robots assembling the base body of the cars and installing the engine. Then, there were mini robots to fix the tyres, steering, and other parts of the car. Honda's visit enlightened us about the functioning of the giant car manufacturing company and its fast process.

Visiting Mt. Fuji was another wonderful experience. We had a tour guide with us, Ms. Akiko, who provided lot of knowledge about Japan and the very shy Mt. Fuji-san. The weather was foggy and raining so we were not lucky enough to get a glimpse of Fuji-san from the 5th station. However, we enjoyed a cruise ride along Hakone Lake. Nature is so beautiful.

At the end of the training sessions, we attended an "Evaluation Meeting" by the JPO. We were asked to provide our comments and suggestions for improving the program. The participants provided their comments and feedback for the program. After this session, a "Closing Ceremony" was held and we were honored with "Certificates" for successfully completing the entire training course. All the participants were happy and joyful. We bid farewell to each other and promised to remain in touch. During the period of three weeks, we actually developed strong bonds and became good friends, IP friends.

Overall my first visit to Japan was a wonderful experience. The hospitality and politeness of Japanese people made me ecstatic. People are extremely helpful and generous. The cleanliness of the country is something which makes Japan even more beautiful. The Japanese tradition of bowing while greeting one another is a way which makes me feel that each and every human being is equal and there is no difference between individuals. Japanese culture and tradition is worth understanding.

On the last day in Japan, early in the morning, there were tremors felt due to an earthquake, rocking the city of Tokyo. For Japanese people, earthquakes are very common and their lives go on as if nothing happened. I packed my bags and bid goodbye and thanks to HIDA for giving me this opportunity to visit Japan. I arrived at Narita Airport and boarded my flight back to India with lots of memories.

My sincere thanks to Myodai-san, Inoue-san, Kojima-san and all the people of Japan for making it a memorable trip and a once in a lifetime experience for me.

Global IP India is a Delhi-based IP firm with a strong Japanese connection.

Impact of JPO/IPR Patent Expert Training for Unlocking the Potential Developing Countries

Mr. Ritesh Agrawal, (India) Ph.D., LLM, Indian Patent Agent Assistant Manager- Corporate Strategy & Global IP, Wockhardt Limited



Mr. Ritesh Agrawal

(JPO/IPR Training Course for Practitioners Specializing in Patents, Aug. 24-Sep. 11, 2015)

Introduction:

I am a pharmaceutical chemist, studied medicinal chemistry as well as pharmacy, and practice in the field of Intellectual Property related matters, especially in patents. I am also a qualified registered Indian Patent Agent. My area of work is patents related to Pharma, which including pharmaceutical formulations, chemistry process, polymorphs and particle size.

My vision is to see the Intellectual Property world in view of Generic Pharma Industry and its related Food & Drug Administrative Laws (FDA Laws). Today, Generic Pharma Industry is growing across the globe including in Japan and USA, because it provides low cost effective medicines to humans and serves mankind. In Japan, I saw many good examples of how they nurture their culture there and help peoples of developing countries to grow.

IP Situation in India:

India is a country of multicultural people with respect to languages, religions, dance, music, architecture, food, and customs differ from place to place.

India is one of the countries, which contributes most to providing low cost medicine to the world community. Our honorablePrime Minister Mr. Narendra Modi is facilitating various IP policies under the flagship programs "Make my India" and "Startups Intellectual Property Protection" (SIPP).

The new policy is clearly informed by pro-IP ideology, which big capital promotes in order to gain from current developments in science and technology. It is a "first of its kind" policy for India, covering all forms of Intellectual Property together in a single framework. The policy follows a completely new set of principles that are tilted in favor of Intellectual Property (IP) owners in every possible way. The principles laid down in the policy incentivise IP owners by granting them monopoly rights. The policy rewards big capital without paying attention to the balance to be established vis-à-vis public interest and development. Since the government presents itself as pursuing development, it is ironic that its new policy gives very little importance to either public interest or the developmental challenges that India faces.

The policy will govern the following acts: Patents, Trade Marks, Design, Geographical Indications of Goods, Copyright, Protection of Plant Varieties and Farmers' Rights, Semiconductor Integrated Circuits Layout Design and Biological Diversity. It is expected, therefore, that it will impact sectors as diverse as pharmaceuticals, software, electronics and communications, seeds, environmental goods, renewable energy, agricultural and health biotechnology, and information and communications.

These initiatives for nurturing innovation and creativity through a scheme for start-ups as start-ups have been recognized as the power of innovation, technology and ideas. The Indian government also launched the ambitious scheme "StartUp India,

As part of this policy, Indian government has started scheme for facilitating Startups Intellectual Property Protection (SIPP) to nurture more innovation as well as creativity and promote awareness and encourage IPR protection amongst startups.

Despite these encouraging steps, there are certain instances where government is lacking with respect to section of 3 (d) of India Patent Act. Section 3 (d) of Indian Patent Act has been a source of rising debate, especially when pharmaceutical companies are considered.

Section 3 (d) reads as follows:

"The mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance or the mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant".

Explanation: For purposes of this clause, salts, esters, ethers, polymorphs, metabolites, pure form, particle size, isomers, mixtures of isomers, complexes, combinations and other derivatives of known substance shall be considered to be the same substance, unless they differ significantly in properties with regard to efficacy.

The aim of inclusion of section 3 (d) by way of an amendment in 2005 of the Indian Patent Act supports humanitarian aspects like affordable drug prices, and the prevention of "ever greening", but it is not very encouraging from a business perspective.

The essence of section 3 (d) is that it is a new form of an existing substance; it was not patentable unless new forms demonstrate increased efficacy and "mere new use" of a known compound cannot be patented.

A multinational pharmaceutical company's perspective is to maintain monopoly to maximize profits for the huge investment incurred during the research and development of a product. But in the process access to medicine, which is of prime importance, does not happen although the business motto is encouraged under Trade Related Aspects of Intellectual Property Rights (TRIPS) and national laws. The cost of doing research and development escalates. Many MNC's are now collaborating with Indian companies, which give a cost-effective drug discovery and development solution. There is also a surge of patent withdrawals and compulsory licensing.

Experience in JPO/IPR- Patent Expert Training:

I attended this training last year in 2015, which provided very good learning in the field of Intellectual Property. The training helped me a lot to better develop myself for an organization with respect to Intellectual Property-related activities. I had a very nice experience in Tokyo; I visited many temples as well as tourist places, and got deep insights into Japanese culture. The objective of this article is to share a snapshot of my experiences during JPO/ IPR- Patent Expert Training.

I attended various drafting training lectures during the training, related to chemical inventions. The drafting exercises were very nice, and gave very fruitful learning and exposure.

We also interacted with an Industrial Startup kind of person, who delivered one lecture, on how he developed himself as a business entrepreneur, and shared his experiences with respect patent infringement and suits. He also shared solutions to all of these problems.

We also visited the Japanese Patent Office and met "Respected JPO Commissioner Sir", and also visited the inside of the JPO office. We saw how JPO officials work, and we also explored the search database at JPO. It was a very nice building. We also saw trial courts there.

I also had a very nice experience at a Honda Plant, which, we have visited for one day and I saw how robotic technology is contributing in automobile industries. It was an amazing experience to live seeing how robots are working with human personal to produce Honda Cars. I can't describe what I feel after seeing all of this. For all of this, I would like to thank all the staff of JPO, APIC & HIDA hosting us.

During our visit, all of us delegates stayed in Tokyo Kenshu Center (TKC), it was a very nice experience. Their canteen was very good, provided very good food and took care about Indian food (vegetarian). The staff was very helpful. I thank you all at TKC. I enjoyed being there very much, the company of all delegates was very nice, normally, and we met during breakfast and dinner time.

During my visit to Japan, I also visited Kyoto, which is a city of temples; I visited various temples including Kinkaku-ji. Those days were very nice and memorable. We also returned to Tokyo by shinkansen, which was also a very nice experience for me. We travelled very fast from Kyoto to Tokyo.

The IP knowledge base helps us to create and manage IP rights. JPO/IPR Patent Expert Training has helped me a lot to achieve my target. During JPO/IPR- Patent Expert Training, I interacted with various highly qualified Patent Attorneys from various countries, such as India, China, Brazil, Malaysia, Indonesia, Thailand, Vietnam and Philippines. Traininglectures were very nice and meaningful for learning and development. There were various group activities held during the program, which made training very interactive so we all felt very open to ask questions in a very joyful environment.

All participants were very qualified in the field of Intellectual property so it was very good interaction.

11

JPO/IPR- Patent Expert Training provided me knowledge base on the following topics:

- Patent searches in the all global databases and subsequently patent mapping
- Patentability evaluation, in view of Novelty and Inventive steps
- Drafting Patent specification
- Insights of Japanese Patent law in view of Examiners
- Insights of Japanese Patent law in patent invalidation
- Infringement analysis in Japanese Examiners point of view
- Japanese law related to Licensing
- Patent infringement suits in Japan
- Moreinsights product by process claims in Japan based on recent Japan Supreme Court decisions in view of the pharmaceutical industry.

Conclusion

It was a great privilege for me to be part of JPO/IPR- Patent Expert Training. I learnt a lot with respect to Japanese Patent law and the Intellectual property system globally, and I got very good insight into patent laws and other relevant law, like licensing and agreements.

I got insight into historic landmarks of Japanese Patent Law and their important events of development of systems. The lecture shared various kinds of problem solution examples faced by Japan Patent system.

I feel very enriched after attending JPO/IPR- Patent Expert, days I remember these days.

JPO/IPR- Patent Expert Training is very well-organized and fulfilled my all expectations. I hope to get more and more chances to interact with JPO experts and am also keen to attend such training programs again in future. Lastly, I thank you Japan, JPO, APIC & HIDA for hosting us. It was a great pleasure to interact with you all. Sayonara!!!





12

Introduction of FY 2016 Long Term Fellowship Researchers

Bismillahirrohmanirrohim.



Mr. Alizar (Indonesia)

My name is Alizar, I am a patent examiner at the Directorate General of Intellectual Property Rights, with almost 6 years of experience and I am a specialist on issues related to Chemical technologies.

The Directorate General of Intellectual Property is the executive element that is subordinate and accountable to the Minister of Law and Human Rights headed by a Director General. Directorate The General of Intellectual Property has the task of organizing the formulation and implementation of policies in the field of intellectual property in accordance with the provisions of laws and regulations.

Nowadays Indonesia is a developing country, in a zeal for continuing growing and to be competitive worldwide, it is necessary to stimulate the innovation and technological development that allows to have a strong and sustainable economy, to achieve this aim the Intellectual Property system is an essential tool.

Utilization of medicinal plants as traditional medicine or commonly known Jamu for traditional medicine has been longstanding in Indonesia. There are about 30,000 medicinal plant species in Indonesia. Potential development of Jamu is very high, it can enter the mainstream global market by empowering the optimal economic and business opportunities. More and breadth of market products of traditional medicine both at national and international levels 'force' many nations face of increasingly competitive. One form of competition is recognition intellectual property (IP) for medicinal plant and related-products of a region / country by other regions / countries. Issues related to intellectual property (IP) can have an impact on products, practices and even practitioners.

With this approach, I chose the research theme "intellectual property rights protection for medicinal plants". The legal situation regarding intellectual property protection varies from country to country. My research will focus on the strategy, policy, legislation system and or-

ganizational structure of Japan. Japan has generally strong levels of intellectual property protection. The results of this study are expected to be an additional knowledge for stakeholders in the field of intellectual property, especially intellectual property protection related to medicinal plants in Indonesia.

I would like to express my deepest gratitude to Japan Patent Office (JPO) Asia Pacific Industrial Property Center (APIC), Japan Institute for Promoting Invention and Innovation (JIII) who provided me an opportunity to join their team as intern, and who gave access to the research facilities. I also express my deep gratitude to my advisor Professor Koichi Sumikura of GRIPS and Associate Professor Tetsuya Imamura of Meiji, and the supervisor of my study in APIC, Dr. Yorimasa Suwa, and other APIC staffs for all theirs kindness, patience and guide.

Brief Manuscript to Enishi



Ms. Sofia Rehan Ramli (Malaysia)

Hello there! My name is Sofia Rehan Ramli. I am a patent examiner in the field of Electrical Engineering (Power) from Intellectual Property Corporation of Malaysia (MyIPO). MyIPO is the legal custodian of intellectual property in Malaysia, and plays an important role in promoting intellectual property and also in dissemination of intellectual property knowledge to the public on behalf of the Government of Malaysia.

As a custodian of intellectual property, MyIPO aims to establish a strong and effective intellectual property administration, strengthen intellectual property laws, provide comprehensive and user-friendly information on intellectual property, promote public awareness programs on the importance of intellectual property, and provide advisory services on intellectual property.

Patent, one of the intellectual property rights administered by MyIPO, has tremendously been put in the limelight as one of the key factor in driving a nation's economy. Given the increasing number of patent applications in MyIPO and the likelihood of foreign patent applications filed in Malaysia and vice versa, it is imperative that the patent division of MyIPO to have a methodical organizational structure that would make patent examination and granting process of high quality.

Recently Malaysia has become a signatory of the Trans-Pacific Partnership Agreement (TPPA) that requires Malaysia to align its intellectual property protection with the minimum standards stipulated under the provisions of the TPPA. With the Malaysian Patents Act 1983 is expected to be amended by yearend, the time frame would enable Malaysia to carry out its obligations and commitments in the TPPA prior to ratification.

Therefore I chose the topic "Future Development of Intellectual Property Corporation of Malaysia (MyIPO)'s Patent Division based on Japan Patent Office (JPO)'s Patent Division" for

Japan Patent Office Long Term Study-cum-Research Fellowship Program (FY2016) as my research theme. My research will focus on examining the organizational structure of the patent division in JPO and the benefit that can be gained from such practices, and also on analyzing the appropriate means that MyIPO could follow in order to further strengthen the patent division in MyIPO and overall patent legislation, especially in term of human resource development for patent examiners and patent quality management system.

I would like to thank JPO, MyIPO and APIC-JIPII (especially my supervisor, Dr. Yorimasa Suwa) for this wonderful opportunity to gain in-depth knowledge on the patent system in Japan, to participate in several training courses held in APIC, and of course to experience Japan's magnificent culture and hospitality. A big thank you too to my advisors, Assoc. Prof. Yasuhiro Nikaido from National Graduate Institute for Policy Studies (GRIPS) and Ms. Rumi Ichikawa and Kaji / Suhara & Associates for their kind assistance in making my research in Japan a fruitful one.



Contributions from FY 2015 Long Term Fellowship Researchers

Japan in my heart

Ms. Trinh Thu Hai (Viet Nam) Official, National Office of Intellectual Property of Viet Nam



Ms. Trinh Thu Hai

(The WIPO JAPAN Study-cum-research Program for FY 2015)

I was very lucky to be one of the long-term researchers who visited and studied in Tokyo, Japan - a country that I admire with all my heart - for almost 5 months (May-October, 2015). This was an unforgettable experience in my life.

My course was organized in the framework of the WIPO JAPAN Funds-In-Trust Six month Study-cum-Research Fellowship Program. With the research theme "Role of National Intellectual Property Office in establishment and capacity enhancement of IP Divisions in university and research institutes", I focused on the strategy, policy, legislation system and organizational structure of Japan for supporting the establishment and operation of IP division in universities and research institutes since the starting point in the 2000s as well as the Japan experiences in launching the system covering a period of over 10 years (2004-2015), and the current situation. Based on information from interviewing various concerned stakeholders, my research analyzed Japan's experience in order to propose some proper recommendations for Viet Nam.

Not as usual, this time I was the only researcher instead of two or three. Even having much experience traveling abroad before, I still felt a bit nervous when I arrived at Haneda International Airport (although I already had in hand a detailed-oriented guidance from the coordinator).

The first people I met in Tokyo were Dr. Yorimasa Suwa - my supervisor and Ms. Asako Watanabe - my coordinator who picked me up at the station and took me to the apartment that I lived in during the research time. Their kindness and hospitality in the first meeting really set my mind at rest. (I was sure that Suwa-san would never forget the exhausted feeling when he helped me to take my huge and heavy suitcase from the station to the apartment).

1. Study and research activities

With the talented arrangement of the supervisor and the fervent assistant of APIC staff, I had a chance to meet and work with various Japanese people who left me with very pleasant impressions.

I had two Professors - Koichiro Kato and Makiko Takahashi of Graduate School of Engineer-



ing, Kanazawa Institute of Technology (KIT) to be the advisers. I learnt a lot from them, not only their profound knowledge but also the working active motivation. They touched me with their research methods which were very important for a researcher. Through the discussions with advisers day by day, I could understand more and more on the consciousness of the matters that I should focus on in order to find the relevant solutions.

I also had a chance to meet and interview various representatives of related organizations that I need to collect information from for my final research report. These included the Ministry of Trade and Industry (MITI), Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan Science and Technology Agency (JST), National Center for Industrial Property Information and Training - Japan, Tokyo University, Kyoto University, Kansai University, Keio University, etc.

I was deeply impressed with their thoughtfulness, kindness, patience and intelligence. They were ready to give me all necessary information and advice relating to my research theme. They shared with me their experience as well as their hearty thinking on the development of the IP system. The thing I admired most of them was their enthusiasm. They were all trying their best to contribute to the development of Japan in general and Japan's IP system in



IP Friends Connections December 2016 No. 14

particular. From them, I understood clearly why Japan could become such strong and developed country!

During the research time, arrangements were made for me to participate in various shortterm training courses on related topics organized by APIC which equipped me with lots of valuable knowledge and information to enrich my final research report. In the framework of these courses, I had a chance to visit many organizations, such as: Tokyo Metropolitan Chihaya High School, Surpass Industry Co., Ltd., Science Museum of Toshiba Corporation, etc., where I was able to learn many interesting things in practice aspects. I was deeply impressed with the Science Museum of Toshiba Corporation. It was a place to push up inventive and creative motivation for all visitors, especially for the children.

Books were the "friend" who helped me so much in my research. I love the book-cases in APIC' library. I wished to have all of them in my home, and that's why I took many pictures of the books there!



Besides studying IP, I also had a chance to learn Japanese culture by joining in on the traditional tea ceremony.



2. Daily life

This is the first time I came to Tokyo and I was deeply impressed by everything here:

- Very clean and clear environment, most people walk on the street instead of using their personal vehicles. Traffic is in very strict order. Trees and flowers are grown artistically and beautifully on the both sides of the street.

- High, luxury buildings standing side-by-side with ancient, traditional temples. Even being one of the most industrial and modern cities in the world, Tokyo still maintains the precious traditional characters that make the city impressionable in minds of visitors including myself.



- Many wonderful sight – seeing spots, each of them having its own special characteristics. During my almost 5 months in Tokyo, I had opportunities to discover and enjoy many places in Tokyo and the ancient city of Kyoto also. I really admired the overall city planning policy of Japan in general and Tokyo in particular. Odaiba is famous for the charming manmade beach and beautiful Rainbow Bridge; Akihabara is exiting with electronic, high-tech devices and colorful animations; Asakusa is famous for the Sensō-ji Buddhist temple - one of the biggest temples in Tokyo and Tokyo Skytree standing beside romantic Sumida river; Shibuya is symbolic as a center of youth culture with thousands of shopping, entertainment center and restaurants; Shibuya is also a Commercial area with many modern-high buildings standing side-by-side....

Besides Tokyo, I was so lucky to have a chance to visit historical **Shimoda port** where I can see the Monument of the arrival of U.S N. Commodore Perry's Squadron and the statue for U.S. Japan Friendship Flame.

- There is "another world" under-ground. I was so amazing to discover the interlacing Tokyo Metro Stations (despite losing my way countless times!). Each of them was a multi-level



and boundless shopping center with seemingly thousands of shops and restaurants. I could spend all day tirelessly again and again there, such as: Tokyo Station, Ginza Station, Asakusa Station, Shinjuku Station, etc.

- A city of high-tech accessories. I was so surprised that escalators could be found anywhere, especially in subway stations. Some are very long, some are very short but all of them are very convenient.

I love the "complicated toilet system" in Tokyo also. I could not figure out how to use it the



first time, but finally, I had to recognize that it was really convenient for the users.

These were not only clear evidence of the high level scientific and technological development of Japan but also demonstrated the fact that Japan's science and technology was for humans first and foremost.

3. Overall impression and achievements

There were many other things I would like to tell about my time in Japan. It was really an amazing and unforgettable experience. I gained so much from the research course, not only knowledge necessary for my daily work but also lots of valuable things important for my life.

After the course, I love and admire Japan more and more. I am now encouraging my son to study Japanese and I am sure that I will come back to Japan one day!





Articles from the former trainees

Intellectual Property in Brazil: A Challenge to overcome JPO/IPR COURSES: A motivating solution

Ms. Sibelle de Andrade Silva (Brazil) Intellectual Property Coordinator, Business Secretariat Brazilian Agricultural Research Corporation – Embrapa



Ms. Sibelle de Andrade Silva

(JPO/IPR Training Course for Practitioners Specializing in Patents, August 24th to September 11st, 2015)

INTRODUCTION

Intellectual property (IP) is one of the most challenging areas to work with in Brazil. Managing IP in the country, from the government point of view and from the private companies' side, is hard work. There are many opposing interests to be coordinated. Besides, the overall numbers disclosed by WIPO (World Intellectual Property Organization) show that the country needs to achieve a better understanding of the meaning of IP to foster its innovation processes. Regarding another important Brazilian intellectual property asset, plant varieties, UPOV (The International Union for the Protection of New Varieties of Plants) also shows numbers that lead to similar conclusions. The statistics give signals that Brazil needs to mature its behaviour regarding managing IP.

Using numbers released by WIPO and by UPOV this article shows evidence of the need of maturing IP management in the country. On the other hand, by means of the content of the course *JPO/IPR Training Course for Practitioners Specializing in Patents*, this paper aims to propose ways to achieve such IP development stage in Brazil.

OVERALL BRAZILIAN CONTEXT

In Brazil, in the context of IP, patent issues are puzzling, but they are not alone. On the other hand, there is another IP category that plays an important role in the Brazilian market: plant variety protection. Comparing the numbers regarding patents and plant variety protections in Brazil it is further possible to note how the effective use of IP in the market can enhance the maturity of IP management processes.

Figure 1 shows a global comparison for the number of patent grants all over the world. The number of patent grants in each country redefines and re-sizes the borders and area in Figure 1. In this context, Brazil has one of the smallest amount of patent grants while Japan has one of the biggest. Since patents are an essential tool for innovation, it is more than reasonable to suppose that as many patents are filed in a country, more concrete innovation is achieved there. On the other hand, that number also indicates the interest from external organizations and companies to a specific country market. Then, it is essential to understand how that number is shared between the residents and non-residents of a country. Furthermore, not only patents but also all forms of IP are relevant tools for innovation processes.



© Copyright 2006 SASI Group (University of Sheffield) and Mark Newman (University of Michigan) – Creative Commons Licence. World map available at http://www.worldmapper.org/images/largepng/167.png.

Figure 1 – World map re-sized according to the number of patents granted in each country.

As an initial supposition it would be beneficial for Brazil to have more patent filings, and consequently more patent grants. In spite of the fact that the number of patent documents is dependent on aspects such as the number of inhabitants, infrastructure, research, development investments and so on, it is clear that the number of patent documents in Brazil would be higher than what is shown in Figure 1.

Comparing Brazil's size to some developed countries and regions such as Japan (JP), Europe (EP) and United State of America (USA), it is easy to see the contrast in the volume of patent protection. Comparison of the numbers related to resident and non-resident patent filings and to plant variety protection make the contrast even bigger. This will be the issue discussed below.

RESIDENT, NON-RESIDENT NUMBERS AND THE JPO/IPR TRAINING COURSE

By treating the data from WIPO and UPOV it is possible to better analyse the contrast between different countries and regions regarding IP by taking an overview of the numbers related to residents and non-residents. There are also relevant differences between patents and plant variety protections in Brazil related to the overall historical data.

Then, by using such numbers the graphs shown in Figure 2 and Figure 3 were created.

Figure 2 shows the amount of new patent filings, from the year 2010 to 2014, considering the residents and non-residents from Brazil (BR), United States of America (USA), Japan (JP) and all of Europe (EP). Figure 3 shows the amount of new plant variety protection applications, from the year 2010 to 2014, considering the residents and non-residents from Brazil (BR), United States of America (USA), Japan (JP) and all of Europe (EP). The percentage indicated in each bar in both graphs represents the amount of resident filings (year and country/region). The years were selected because they are the most up-to-date data available on UPOV and WIPO websites.



Figure 2 – Number of new patent filings from residents and non-residents, by year, in Brazil (BR), United States of America (USA), Japan (JP) and Europe (EP), with indication of residents' percentage filings.



Figure 3 – Number of new plant variety protection filings from residents and non-residents, by year, in Brazil (BR), United States of America (USA), Japan (JP) and Europe (EP), with indication of residents' percentage filings.

Comparing the Figures 2 and 3 it is possible to raise an issue regarding non-resident and residents' filings. Two major concerns justify the imbalance between the resident and non-resident filings of patents in Brazil: (i) infrastructure deficiencies in the Brazilian Patent Office that cause delays and backlogs of examinations; and (ii) a poor dissemination/culture about IP among the population.

The issues regarding the infrastructure of the Brazilian Patent Office will not be discussed in this paper. It is an important issue; however, the issue of the lack of knowledge of IP is even more critical because it requires a big change in Brazil, mainly in the educational systems.

In both Figure 1 and 2 the amount by country itself shows that Brazil is a small patent and plant variety applicant compared to Japan, USA and Europe.

Regarding patents, only an average of 16% of filings come from residents. Considering plant variety protection, the average of new residents' filings is 60%. These numbers show that in Brazil residents are more aware of plant variety protection, compared to non-residents, than in the case of patents.

As the Figures show, the number of new plant variety protection applications is smaller than the number of new patent applications in Brazil. However, the comparison shows that residents are working on new plant varieties in a more effective way than non-resident competitors. Nowadays, the situation in the Brazilian market of new plant varieties is that there are important Brazilian players in it; one of those players is the Brazilian Agricultural Research Corporation (Embrapa), for instance.

In USA, Japan and Europe the number of resident filings is very high, being more than 60% in all of them in Figure 2. This fact shows that the strong presence of residents is important for the dynamism of the market for both types of protections, namely, patents and plant varieties. In the case of Brazil, its agricultural industry and tradition explain the superlative result in plant variety protection regarding the participation from its residents.

However, the pathway for patents is a more difficult road for the Brazilian market. Considering the averages (2010 to 2014) in the percentage of resident filings, the smallest is Brazil, with 16%; the highest is Japan, with 83%. Thus the difference between Brazil and the highest average of resident filings is about 500% in the case of patents.

In the plant variety protection area, Brazil has an average of resident filings of 60%; the highest country average is USA, with 80%. Thus the difference between Brazil and the highest average of resident filings is around 100% in the case of plant variety protection.

Despite not presenting official market numbers to compare, the impression from some news channels and overall observation of the market is that plant varieties developed by Brazilians succeed on the domestic market in a more effective way than do technologies protected by patents. Furthermore, although plant variety protection is in a better situation than patents numbers (regarding participation form residents), the amount of new plant variety protections remains stable, which could lead to a possible stagnation. Naturally, there are other factors that should be considered and studied, but the IP numbers show a relevant indicator to the market situation.

Due to the lack of knowledge regarding IP among students, entrepreneurs and citizens in general, it is conceivable to account to unfamiliarity with IP matters the low Brazilian performance in using IP in its innovative domestic market.

In this context, I will consider some relevant points from my experience. I graduated in chemical engineering in Brazil in 2007. Until I started working for a mining company in its innovation management area in the last year of my graduation course, I had never heard about patents. As part of graduation, students published papers. However, I had never encountered the possibility of patenting developments in any discipline. My final graduation work was about controlled drug release and I had, at that time, no information about how to search for any patents about that technology.

I entered deeper into the IP world only after starting a master degree at the Brazilian Patent Office. Nowadays, I have been working in this area for almost ten years and the lack of knowledge about IP and patents in graduate students and Brazilian society seems to be almost the same as before.

The *JPO/IPR Training Course for Practitioners Specializing in Patents* was one of the best training opportunities I have ever had. The benefits and knowledge I gained from the lectures and from better knowing the wonderful Japanese culture are immeasurable.

During the *JPO/IPR Training Course* some lectures showed that in Japan students have contact with IP questions from the lowest levels of education. Mr. Kiyohide Okamoto, from Osaka Institute of Technology, for instance, showed that the institute has a graduation course about IP management. Merely the existence of such an initiative shows how mature IP is in the country and how far away from that is the reality in Brazil. Why not promote a similar initiative in Brazil, or even promote more specialized courses about IP? Nowadays, Brazil has a few good specialized courses on IP. Furthermore, however, some of the existing ones do not have highly qualified professionals precisely due to the lack of such training initiatives.

Mr. Yoshitoshi Tanaka, from the Tokyo Institute of Technology, showed many examples that can inspire initiatives in Brazil for overcoming the current situation. During the lecture he showed that a balance between resident and non-resident patent filings is a characteristic of mature IP systems. From the data he showed that it is possible to conclude that the number of patent filings from residents is directly proportional to the level of development of a country's economy. Participants from the JPO/IPR courses should spread such knowledge in their countries in order to improve the IP culture overseas.

In this context, the methodology and experience showed by Mr. Mitsuhiro Takasaki in his lecture could also be an initial step to improve the use and effectiveness of IP systems in Brazil. The methodology MPDP (Marketing, Patent, Design and Promotion) is a success case that involves strong dissemination of the IP culture inside a small company, in this case, the company Engineer. Mr. Takasaki showed that more than half of the employees at Engineer have a certificate as an IP management specialist. This fact certainly contributes to the success of some products from the company. It was very inspiring to have contact with such an interesting example of a very successful use of education on IP for improving IP and innovation management. Particularly, the example is a stimulus for continuing to work hard on IP area in Brazil.

During the course in Japan, it was an honour to have lectures with the first person to conduct a patent search in Epson, Mr. Masataka Kamiyanagi. In his lecture, there was additional and relevant information. As also discussed in other lectures, competitive intelligence using patent searches is essential for the survival of companies, mainly in some specific fields. The diversification of business segments in Epson throughout the years showed an example of this fact.

The lecture given at Honda showed further concerns that countries like Brazil should have. The main concern is related to enforcement. Honda's exposition taught that the company has aggressive behavior toward counterfeiters. Thus, using competitive intelligence to monitor

27

competitors and to monitor counterfeiters is key to a strong IP strategy.

These were just a few examples from the knowledge gained in the JPO/IPR initiative. Besides the class learning, it was a unique experience to be in touch with participants from different countries, cultures and professional skills.

The travel to the other side of the world showed me a new side of IP matters and expanded my understanding of IP and human culture. As well as learning about IP, Japan also gave me amazing and unforgettable memories: travel in the bullet train, Shinkansen Nozomi; walks around Kyoto, Kamakura, Tokyo, Osaka, Akihabara, Asakusa, Odaiba, Shibuya; Kita-Senju Station; the TKC; the earthquakes; the beautiful Skytree; the temples Kinkakuji, Kiyomizudera, Hase-dera; the Boss Coffee, the drinks/food machines, the ramen; the Big Echo Karaoke; the classmates patent samurai warriors; the peaceful Hakone lake; and the natural energy from Mt. Fuji, that unfortunately was hidden by clouds due to the rainy weather, giving me a special reason to seek an opportunity to go back to see it.

CONCLUSION

The course JPO/IPR Training Course for Practitioners Specializing in Patents represents one of the best compilations of content for improving IP knowledge. Each of the lectures and discussions taught several relevant aspects that need to be taken into account in IP management in any country or company.

The huge differences between Brazil and Japan's numbers, as well as the differences among developed and developing countries show not only fragilities but also opportunities for growing and enhancing innovation means using IP as a tool.

Thus, courses like the ones promoted by JPO are essential to help economies like Brazil to graduate from being low IP users to being better IP managers and players inside their own markets and abroad.

Similar to Mt. Fuji during my stay in Tokyo, the potential benefit of IP to innovation is partially hidden in Brazilian society. Knowledge is the sunlight that will help the country to overcome its challenges.

REFERENCES

- Report and numbers concerning plant variety protection available at: http://www.upov.int/edocs/mdocs/upov/en/c_49/c_49_7.pdf, accessed on 27th May, 2016.
- Report and numbers concerning patent applications available at WIPO IP Statistics Data Center: http://ipstats.wipo.int/ipstatv2/index.htm, accessed on 26th May, 2016.
- Figure 1: map available at *http://www.worldmapper.org/images/largepng/167.png*, accessed on 24th May, 2016.

• Figures 2 and 3 were fully made and designed by the author of this paper based on the data from WIPO and UPOV accessed on the disclosed websites.

Intellectual Property Situation in India: A Prolegomenon

Mr. Ashwini Siwal (India), Assistant Professor, Faculty of Law, University of Delhi,



Mr. Ashwini Siwal

(JPO/IPR Training Course for IP Trainers, Jun. 17 – Jul. 1, 2015)

2016 has seen many upheavals as far as the intellectual property situation in India is concerned. The developments are several and of utmost importance, the most important and clinching being the cabinet approval of the National Intellectual Property Policy¹. Now India also has a National IP Policy like its global counterparts. But what is important here is to gauge this development of recent times which has immediate bearing on the past, in particular the role of the USTR², the judgment of Supreme Court of India in 2013³ and the granting of a compulsory license to the cancer drug Nexavar⁴. To further understand the IP situation in India it is incumbent to cursorily examine the present overall IP scenario in India, including those mundane events in other kinds of intellectual properties viz. Copyrights, Trademarks, Geographical Indications, Industrial Designs and Utility Models etc. which did not invite instant uproar and hullaballoo like issues relating to patents but in fact have far reaching implications⁵.

India was a WTO/TRIPs compliant nation even prior to the enactment of the National IP Policy⁶. India has domestic legislations in consonance with TRIPs⁷ and other international instruments relating to intellectual property and related issues⁸. Intellectual property jurisprudence in all fields of IP in India is robust and mature enough to cater to all nuances relating to intellectual property barring few exceptions⁹. Awareness and dissemination of knowledge relating to ownership of IP and its consequential benefits to the owner and public at large are focal points for the IPO (Indian Patent Office)¹⁰ and other organizations with similar endeavors. Presently several such events/workshops/conferences/awareness programs are being organized by the concerned government departments and private stakeholders with a view

¹ See http://pib.nic.in/newsite/PrintRelease.aspx?relid=145338

² See https://ustr.gov/issue-areas/intellectual-property/special-301/2016-special-301-review

³ See http://www.ip-watch.org/2013/04/04/the-judgment-in-novartis-v-india-what-the-supreme-court-of-india-said/, Available at http://supremecourtofindia.nic.in/outtoday/patent.pdf

⁴ See http://spicyip.com/2016/03/patent-pimping-caving-in-on-compulsory-licensing.html, Available at http://www.ipindia.nic.in/ iponew/compulsory_license_12032012.pdf

⁵ Other IPs are equally important and related events need perusal and analysis.

⁶ See http://articles.economictimes.indiatimes.com/2014/04-25/news/49405911_1_indian-it-indian-patent-act-ipr-laws and see http://articles.economictimes.indiatimes.com/2014-10-03/news/54599823_1_ipr-issues-indian-ipr-ipr-regime

⁷ The Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) is an international agreement administered by the World Trade Organization (WTO) that sets down minimum standards for many forms of intellectual property (IP) regulation as applied to nationals of other WTO Members. It was negotiated at the end of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) in 1994.

⁸ See http://www.wipo.int/wipolex/en/profile.jsp?code=IN

⁹ Supra note 6

¹⁰ See generally http://www.ipindia.nic.in/

to assimilate as many stakeholders as possible.¹¹

With the induction of the National IP Policy, a new energy seems to have been induced among the various stakeholders¹². Since the stipulated goals of IP policy are bewitching and convincing, it is intriguing and fascinating to learn and understand the facts pertaining to how this new IP policy was enacted and its future vision in light of past experiences and loopholes.

In India, Patent law has been the center of attention for quite a few years now¹³. Patents, being lucrative propositions, remain in the limelight and under discussion, so let us get started with an analysis of the patent situation in India. Recently two particular events in the realm of patent law which have led to paradigm changes in the IP spectrum in India require mention and brief analysis. First is the epic judgment delivered by the Supreme Court of India which put an end to the long-pending patentability battle by Novartis for a leukemia drug named GLIVEC, a beta-crystalline form of imanitib mesalyte.¹⁴ And second is the compulsory license granted in the case of Natco Pharma and Bayer Corporation.¹⁵

In the first matter, the validity of section 3(d) of the Patents Act¹⁶ was challenged under the assertion that it is incompatible with the TRIPS Agreement. It is matter of prime importance at this juncture to see what TRIPS/WTO mandates and what our domestic legislation, i.e. The Patents Act, 1970, reads. It can be easily understood from the language of Article 7¹⁷ and 8¹⁸ of the Agreement on TRIPS that the pivotal focus of a patent system is to create a balance between the inventor's rights and the duties and responsibilities of a welfare State, which includes making lifesaving drugs easily accessible. It was agreed that the TRIPS Agreement does not and should not prevent members from taking measures to protect public health. It is patently clear from the language of the above-mentioned articles that section 3(d) is based on the policy of public welfare and public good, especially public healthcare. The Doha Declaration in its essence says that patented inventions should be made available to the public at reasonably affordable prices¹⁹. This essence of Doha is reflected in section 83(g) which states

¹¹ See http://www.sristi.org/cms/activities

¹² http://www.hindustantimes.com/india/cabinet-approves-national-ipr-policy-gives-innovation-a-push/story-ybg-kzzVWjeCVfouC7lh9BK.html

¹³ Yang deli, "Local working of patents- Law and implementation in India" 18 JIPR 22 (2013)

¹⁴ AIR 2013 SC 1311

¹⁵ See at http://www.ipindia.nic.in/iponew/compulsory_license_12032012.pdf

¹⁶ Section 3(-d) the mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance or the mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant.

Explanation.—For the purposes of this clause, salts, esters, ethers, polymorphs, metabolites, pure form, particle size, isomers, mixtures of isomers, complexes, combinations and other derivatives of known substance shall be considered to be the same substance, unless they differ significantly in properties with regard to efficacy.

¹⁷ Article 7 - Objectives: the protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations.

¹⁸ Article 8 -Principles: 1. Members may, in formulating or amending their laws and regulations, adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of this Agreement.

³¹

that the patented invention should be made available to the public at reasonably affordable prices.²⁰

Second is the only instance of a compulsory license in India which took place in 2012 wherein the then Controller General of Patents Mr. P.H. Kurein ordered compulsory licensing of the cancer drug "Sorafenib Tosylate", a compound covered under Patent No-215758 and sold under the brand name "Nexavar", to the Indian generic applicant Natco Pharma against patentee Bayer corporation, an internationally renowned manufacturer of innovative drugs, under section 84(1) of the patent act, 1970²¹

The costs of many new medical products are becoming unsustainable for even the wealthiest countries in the world.²² In India the cost of medicine makes it out of reach for three quarters of the population.²³ It is indisputable that drug-making involves much toil and expenditure. Pharmaceutical research and development (R&D) entails significant costs and resources. Patent regime is deemed as a fostering regime for investment in pharma R & D. But can the State forget its responsibility towards its citizens and towards their welfare? The argument that there must be a separate direct investment protection regime for the protection of drugs seems cogent given the fact that granting a patent requires few qualifications/prerequisites to be fulfilled by the inventor²⁴ and cases like the present one invites uproar at international fora.

There has been a constant debate across the globe as to the point of balancing between inventor's rights on the one hand and societal welfare on the other.²⁵ The philosophical foundation of intellectual property rights is to reward/incentivize the creator/inventor by conferring a right in the form of patents, copyright, etc. But this intellectual property regime has a societal responsibility of benefiting the masses at large with the fruits of the invention made.²⁶ Intellectual property legislation does not explicitly talk about this balancing.²⁷ In the Novartis judgment, speaking through the Supreme Court of India, the above-mentioned act of balancing was reflected wherein the court outweighed the inventor's right in favor of social need²⁸ and reiterated the same egalitarian need through India's first ever compulsory license in the matter of Natco Pharma and Bayer Corporation. Because of these two above-cited steps, Indian judiciary and India's stand on evergreening of patents²⁹ and compulsory licensing has

¹⁹ The November 2001 Doha Declaration on the TRIPS Agreement and Public Health was adopted by the WTO Ministerial Conference of 2001 in Doha on November 14, 2001. It reaffirmed flexibility of TRIPS member states in circumventing patent rights for better access to essential medicines. Available at http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_trips_e.htm (last visited on 15-05-2014)

²⁰ Gopakumar G Nair and Andreya Fernandes, "Patent Policies and provisions relating pharmaceuticals in India" 19 *JIPR* 7 (2014), also see generally Section 83, 84, 92 of the Patents Act, 1970.

²¹ See the complete order at http://www.ipindia.nic.in/iponew/compulsory_license_12032012.pdf

²² Margaret Chan, World health Organization. Available at http://accessourmedicine.com/#declaration_form (Last visited 09-05-2014)

²³ Available at http://accessourmedicine.com/#declaration_form (Last visited 09-05-2014)

²⁴ Shamnad Basheer, "The invention of an investment incentive for pharmaceutical innovation" available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2203440

²⁵ Jakir Thomas, "IP case law developments"12 JIPR 508 (2007)

²⁶ Gopakumar G Nair and Andreya Fernandes, "Patent Policies and provisions relating pharmaceuticals in India" 19 JIPR 7 (2014)

²⁷ But there are provisions in the IP legislations inferring the balancing for e.g.- section 84, The Patents Act, 1970.

²⁸ Supra note 13

come under scrutiny at an international level.³⁰

Through the USTR (United States Trade Representative), the United States has been scrutinizing the developments of IP in its trading partners and lists them annually in the "Special 301 List"³¹. This year's "Special 301 List" again places India as a PWL (Priority Watch List) country³². Countries that happen to be placed as PWL countries remain under threat of investigations and sanctions provided under the Trade Act, 1974 and an out of cycle review by the USTR can be conducted in the country to grade its IP compliance, which unfortunately all happens unilaterally and without any legal basis.³³

India has been featured in the PWL (Priority Watch List) time and again since the USTR's inception. Notwithstanding this, India unequivocally uses flexibilities provided under the TRIPS Agreement³⁴ and the assertion of the same can also be seen in the first National IP Policy of India.

Although the National IP Policy is an offshoot of the events of the past, it seems to be well articulated and balanced. Fortunately, it has not abrogated/amended section 3(d) of the Patent Act, 1970; rather, it is explicitly asserted by the Minister unveiling the policy that a provision like 3(d) is well balanced to curb evergreening. Undoubtedly every policy/law enacted requires perusal and application to finally gauge whether the same can stand the test of time or not.

Copyright comes next when one thinks of talking about another intellectual property and its situation in India. Law relating to copyright in India was amended in 2012. The idea, inter alia, behind the amendment was to address the long-felt need of copyright creators in the cine films industry and to incorporate digital rights management provisions into the Indian Copyright Act, 1957 in compliance with the WIPO Copyright Treaty (WPT), 1996³⁵ and WIPO

²⁹ Ever greening is an aspect of patenting that leads to enhancement of patent life cycle/term. It is largely employed by the pharmaceutical companies to develop bullet proof patent protection around lucrative drug molecules. It is done in an artful manner by protecting large number of inventive aspects over the basic invention. Though this they continue to retain market monopoly.

³⁰ Available at http://wap.business-standard.com/article/economy-policy/patent-rights-meet-on-us-concerns-114041 900624_1.html (Last visited 0n 09-05-2014) & http://economictimes.indiatimes.com/articleshow/34438742.cms?utm_ source=contentofinterest&utm_medium=text&utm_campaign=cppst (Last visited 0n 09-05-2014)

³¹ U.S. is authorized to prepare this report under section 301 of the U.S. Trade Act, 1974, Special 301 is a trade and industry practices report that identifies intellectual property rights offenders that could face trade sanctions and other countries whose IPR regimes are deemed to be an area of lesser concern.

³² Available at https://ustr.gov/sites/default/files/USTR-2016-Special-301-Report.pdf

³³ See generally http://spicyip.com/2014/10/india-us-ip-working-groups-insufficient-for-ustr-continuing-with-unilateralocr-as-well.html

³⁴ Wherein India argued in support of a need to optimally utilize compulsory licensing provisions, nip ever-greening of patents, and flexibility of the international patent system. It added that efforts must also shift towards studying the impact of grant of compulsory licenses and the consequential impact on prices of patented drugs, firmly standing by its pro-equitable healthcare patent regime, a regime the US has expressed its displeasure at. Whereas in subtle defiance to the US, EU stated that efforts should be made to arrive at a patent system efficient enough to facilitate innovation to reduce the "global disease burden. Available at http://spicyip.com/2014/02/ nationspeak-at-the-wipo-standing-committee-on-patents.html (Last visited on 10-05-2014), see also at http://www. dnaindia.com/money/report-india-s-ipr-regime-is-legal-equitable-wto-compliant-fm-arun-jaitley-2212246

³⁵ *Refer* to http://www.wipo.int/treaties/en/ip/wct/trtdocs_wo033.html for text of the treaty (last visited 3rd of Feb., 2013).

Performers and Phonograms Treaty (WPPT), 1996³⁶

Indian Parliament, in a marked departure from its hesitant approach in moving towards the TRIPs + standard, has provided for DRM (Digital Rights Management) provisions with the Copyright (Amendment) Act of 2012³⁷ in an harmonizing attempt³⁸ introduced Section 65A and Section 65B. This attempt to harmonize Indian copyright law with the two WIPO Internet Treaties is supposedly considered as desirable for affording adequate protection in the digital environment. However, this underlying presumption and the desirability of DRM provisions have always been an unresolved issue.

Another important development which requires mention and perusal is the case of Academic Photocopying pending before the Delhi High Court in India.³⁹ The law relating to fair deal in the Indian copyright system is in transition as far as the sweep and scope of "fair deal" is concerned. In the recent past, a good amount of distortions and upheavals have been seen in the fair use/fair deal jurisprudence under the copyright laws of various jurisdictions⁴⁰. Courts of various jurisdictions have been aligned to uphold the public rights for promoting the objective of copyright law and to meet the surge of public need⁴¹.

Section 52 of the Copyright Act, 1957 is the law which tries to strike a balance between the private right and public right, where it reads that in some situations, viz. for research, teaching and educational purpose, etc., fair use of copyrighted work is permitted. However, no statutory and judicial interpretation of fair deal is available in the Indian context to tackle the problem of photocopying for the welfare of students in compliance with Indian Constitutional law and its envisaged right to education.

The matter of academic photocopying pending in the Indian court since 2012 involving a premier academic institution and six renowned publishers is being debated and discussed by academicians at length. The case is of utmost importance and has far reaching implications in a populous country like India where students cannot afford to buy expensive books and in lieu of that have to rely on course packs supplied or instructed to be read by university teachers.



³⁶ *Refer* to http://www.wipo.int/treaties/en/ip/wppt/trtdocs_wo034.html for text of the treaty (last visited 3rd of Feb., 2013)

³⁷ For text of the Copyright (Amendment) Act, 2012 refer to http://www.manupatra.com/ (last accessed 9th of February, 2013).

³⁸ See, Scaria, Atul Geogre, Does India Need Digital Rights Management Provisions or Better Digital Business Management Strategies?, JIPR, Vol. 17, September 2012, pp. 463-477. Also Sibal Kapil, Statement of Object and Reasons-Copyright(Amendment)Bill, 2012, http://164.100.24.219/BillsTexts/RSBillTexts/asintroduced/copyright.pdf (last visited 7th of Feb., 2013).

³⁹ THE CHANCELLOR, MASTER and SCHOLARS OF THE UNIVERSITY OF OXFORD and ORS. versus RAMESH-WARI PHOTOCOPY SERVICES and ANR. Available at- http://delhihighcourt.nic.in/dhcqrydisp_O.asp?pn=45772&yr= 2013

⁴⁰ In the summer of 2012, the Supreme Court of Canada issued rulings on five copyright cases in a single day. The cases represent a seismic shift in Canadian copyright law, with the Court providing an unequivocal affirmation that copyright exceptions such as fair dealing should be treated as users' rights, while emphasizing the need for a technology neutral approach to copyright law. And CAMBRIDGE UNIVERSITY PRESS, OXFORD UNIVER-SITY PRESS, INC., SAGE PUBLICATIONS, INC. versus CARL V. PATTON, et al., http://spicyip.com/2014/10/legality-of-digital-course-packs-the-usa-experience.html

⁴¹ Latest decision on Feb 19th, 2016 the Copyright Board of Canada issued its latest decision on the application of fair dealing to educational copying, providing yet another resounding blow to private use etc.

The fact that, as of now, no attempt has been taken by any court in India to decipher fair deal/fair use, i.e. as to what would constitute fair use in academic photocopying, leads to the dilemma and reliance on foreign judgments becomes incumbent.

Of late there has not been any significant development in the Trade Marks Act, 1999 or the Industrial Designs Act, 2000. The jurisprudence relating to trademarks in India is very robust while, on the contrary, law relating to industrial designs is at a nascent stage.

There has not been any matter brought before the courts invoking the Semiconductor Integrated Circuits Layout-Design Act, 2000.

Last but not least, India's Geographical Indications (Registration & Protection) Act, 2000⁴² is achieving milestones as more than 250 GIs have been registered under this Act since its inception⁴³. It is a sui generis legislation in India, and progressive nations like Japan do not have this kind of protection. Manufactured goods, foodstuffs and agricultural goods are subject to protection under this Act⁴⁴

To conclude, it can be said that the IP situation in India is in transition since IP-driven innovation and litigation has taken a giant leap forward in the last few decades.

⁴² See at http://ipindia.nic.in/girindia/GI_Act.pdf

⁴³ Data available at http://ipindia.nic.in/girindia/

⁴⁴ "Geographical indication" means an indication which identifies any goods as originating in a country or territory, or a region or locality in that country or territory, where a given quality, reputation or other characteristic of the goods is essentially attributable to their geographical origin.

IP situation in Peru

Mr. Pablo Cesar Trelles Dellisanti (Peru), Technical Secretary in charge, National Institute for the Defense of Competition and Protection of Intellectual Property (INDECOPI)



Mr. Pablo Cesar Trelles Dellisanti

(WIPO/JF Training Course on the Intellectual Property Office Management under Japan Funds-in-Trust, Feb. 16 - 23, 2016)

Peru is a country with a vast cultural diversity, located in South America. It is part of the Andean Community of Nations (CAN) integration block, which now also includes Colombia, Ecuador and Bolivia.

CAN, in its quest for greater integration among the countries, issues legal rules denominated decisions, among which are: Decision 486, Establishing Common Industrial Property Regime; Decision No. 345, Establishing the Common Regime on the Protection of the Rights of Breeders of New Plant Varieties; and Decision 351, Establishing the Common Provisions on Copyright and Neighboring Rights.

Decision 486 was issued in order to harmonize national legislation of the Member Countries and adapt their commitments to the provisions of the TRIPS Agreement. It contains general provisions among the Biological and Genetic Heritage and Traditional Knowledge, and also specific issues about patents, utility models, Layout-Designs of Integrated Circuits, Industrial Designs, Trademarks, Geographical Designations, Actions for Infringement of Rights Rights of the Owner, Unfair Competition in Connection with Industrial Property Acts and Business Secrets.

Additionally, as part of negotiations for the signing of the Trade Promotion Agreement between Peru and the United States, Peru assumed a series of commitments regarding the accession or ratification of international conventions and treaties of various kinds. In the case of intellectual property, Peru has ratified the Patent Cooperation Treaty (PCT), the International Convention for the Protection of New Varieties of Plants, in their Act of 1991, and the Budapest Treaty on the International Recognition of the Deposit Microorganisms for the Purposes of Patent Procedure Matters, Trademark Law Treaty (TLT), among others.

The National Institute for the Defense of Free Competition and the Protection of Intellectual Property (Indecopi) was founded in 1992 through Executive Order 25868. Its function is to promote the market and protect the rights of consumers. It also encourages in the Peruvian economy a culture of fair and honest competition, holding harmless all forms of intellectual property — from trademarks and author's copyright to patents and biotechnology.*

Indecopi is a specialized public agency attached to the Office of the Prime Minister, with independent legal status of internal public law. As such, it enjoys functional, technical, eco-

Source: www.indecopi.gob.pe

nomic, budgetary and administrative autonomy (Executive Order 1033).*

As a result of its work in promoting the standards of fair and honest competition among the agents of the Peruvian economy, Indecopi is perceived today as a service institution with a strong concern in fostering a culture of equality in order to achieve full satisfaction among its customers — citizens, entrepreneurs and the State.*

Executive Order 1033 established a change in the structure of IP Offices and turned them into Directorates: Directorate of Copyright (DDA), Directorate of Inventions and New Technologies (DIN), Directorate of Trademarks (DSD). Each IP Directorate is managed by a Director and has a Commission within, a collegiate organ competent for contentious proceedings.

The Directorate of Inventions and New Technologies (DIN) is the competent body responsible for administering, modern and efficiently, intellectual property systems in Peru to promote technological innovation and give value to the creations and inventions in the market. As part of this mission the following are among the functions of the DIN:*

- To hear and resolve, in first administrative instance, applications for patents, patents, utility models, industrial designs, protection certificates, layout designs of integrated circuits, certificates of breeders of new plant varieties and collective knowledge of indigenous peoples;
- Through the Commission of Inventions and New Technologies, know contentious proceedings (oppositions and annulments) derived from registrations recorded by the DIN, including the procedures for violation of the rights of industrial property records DIN registers, and process complaints of infringement of the rights mentioned above;
- Record the amendatory acts referring to enrollees rights, such as transfers, changes of name, address, licenses, among others. The DIN is responsible, in addition, for the list of licenses for the use of technology, technical assistance, basic and detailed engineering, management and franchising of foreign origin; and,
- Promote local culture of use of the patent system and other forms of protection in Peru, and the dissemination of technological information contained in patent documents.

Regarding the patent system in Peru, it is important to note that the level of development of the science, technology and technological innovation has resulted in a limited inventiveness and, consequently, the lack of a culture-country protection of inventions through patents over the years. In this regard, an online survey¹ conducted in 2012 by the DIN of approximately 100 professionals and students last cycles in the areas of science and engineering, concluded that of the total number of respondents:

^{*} Source: www.indecopi.gob.pe

¹ SOLIS IPARRAGUIRRE, Silvia; OSORIO ICOCHEA, Mauricio. "Towards the implementation and use of the tools of Decision 486: Indecopi and its role in promoting Patenting in Peru". In: Symposium on the Andean Regime of Industrial Property, 15 years of Andean Decision 486. Superintendence of Industry and Trade of Colombia. Bogotá, August 2015. pp. 307, 310-312.

- 50% do not know that an invention is a technical solution to a technical problem.
- 64% believe that a patent protects any kind of intangible, when in fact patents grant rights to products and / or processes.
- 59% do not know the principle of territoriality of patents.
- 69% do not know that a patent is valid for 20 years from the date of filing of the application.
- 37% believe (wrongly) that a patent for a physical sample of the invention must be presented.
- 80% had no approach to the patent system through any course, lecture or curriculum.

The aforementioned numbers showed a lack of understanding by the Peruvian society and sectors related to technological innovation regarding the actual importance of the patent system as a tool to achieve an incentive to generate new inventions that allow technical development, which will allow us, in turn, to continue to grow as a country.

In Peru there were a total of 18,033 applications for patents and utility models between 1993 and 2011. However, of this total only 11% of them were for applications processed by natural or legal Peruvian persons, while the remaining 89% were handled by foreigners. In that time period it had on average a total 94 national applications per year, with a ceiling of 126 applications made in 1997 and a floor of 71 applications in 1993 and 1995.



It is then that for every 100,000 habitants of Peru, on average only 0.38 national patent applications by local residents were recorded between 1993 and 2011. This indicator, called 'coefficient of Invention,' placed Peru with a coefficient of 0.37 in the context of Latin America, behind Costa Rica at 0.51, Cuba at 0.55, Colombia at 0.84, Mexico at 1.33, Uruguay at 1.66, Argentina at 1.69, Chile at 2.33, and Brazil at 3.89, among others.

It is in this context that there has been a restricted use of the patent system by Peruvian innovation actors. For example, many of the actors of innovation have not been familiar with the patentability requirements, aspects including what is not considered an invention or what is not considered patentable, or with the provisions concerning the processing of the application.

In response to this reality, Indecopi adopted in 2012 a vital decision that marked the beginning of a new stage in Peru: the deployment of an institutional proactive strategy for promoting the knowledge, use and dissemination of the patent system in Peru, and a coordinated manner within the local ecosystem of science, technology and technological innovation.

38

As a result of this strategy, in 2013 the Office for the Promotion to Patenting (SPP) was created within the Directorate of Inventions and New Technologies of Indecopi. It is important to note that the SPP was also born in a context in which the country has taken as a necessity from a few years ago, particularly since 2011, to promote the development and strengthening of the national ecosystem of science, technology and technological innovation. This is largely thanks to the participation of public organizations that consider this area as a priority for sustainable economic and social development of the nation, such as the National Council of Science, Technology and Technological Innovation (Concytec), the National Competitiveness Council (CNC) the Ministry of Production (Produce) and the Ministry of Economy and Finance (MEF). What this has led to is the establishment and consolidation of funds and development programs in this field such as the Fund for Innovation, Science and Technology (FIN-CyT), the Fund for Research and Development for Competitiveness (FIDECOM), the Fund Framework Innovation, Science and Technology (FOMITEC), the National Fund for Scientific, Technological Development and Technological Innovation (FONDECYT), Startup Peru, among others.

There are four lines of work, around which have framed the efforts and initiatives promoted by the Indecopi in the period 2012-2015²:

- Action Line 1: Promotion of culture-country around the patent system, aimed at bringing the patent system to the community in general, and in particular major direct actors of innovation (independent inventors, universities, research and companies).

- Action Line 2: Implementing service platform designed to prepare, assist and/or strengthen the direct actors of innovation in the use and permanent use of the patent system within the processes of invention and innovation. This platform is configured around two axes:

- Information services with a view primarily to take advantage of patent documents as a source of technological information for the development of inventive activities;
- Counseling services, advice and capacity building, aimed at improving the skills of the direct actors of innovation to effectuate the protection of technical creations and exploit the use of instruments linked to patents.

- Action Line 3: Improving Local patent system, aimed at addressing the bottlenecks that occur in the use of the patent system in the country, either through programs to reduce delays in obtaining patents or impetus to market development service providers linked to patenting, among others.

- Action Line 4: Inter-institutional coordination, focusing on include and positioning the patent system in various activities, programs and institutions' ecosystem that promote technological innovation, including universities and other academic centers, public institutions, private sector organizations, among others.

Among the main initiatives taken to promote the patent system in Peru, the following

² PERUVIAN PATENTED INVENTIONS AND MARKETING SUCCESS. INDECOPI, pp. 22-23. Lima, 2014.

should be noted³:

- Identification Program patentable subject matter in universities: This program was designed and implemented in 2012, thanks to sources of external cooperation (USAID and FINCYT), and through which we identified and analyzed the potential patentability of major research projects developed in the field of science and engineering by researchers, teachers and / or students into public universities.
- National Invention Contest: The National Invention Contest, started in 1996, began in 2012 to focus not only on promoting and rewarding creativity and talent of Peruvians through the development of inventions, but that primarily through this event we successfully promote the approach and increase the number of patent applications in Peru, spreading the use and benefits of the patent system for the processes of invention.
- Quick Patent Program: According to statistics of DIN, for every 10 national patent applications presented in Peru, only 3 are granted. Of the rest, most are abandoned or to a lesser degree, denied by the patent office due to considerations of both form (description of the invention, provision of adequate documentation, among others) and background (compliance criteria patentability). Thus, in order to improve the effectiveness of filing patents in Peru, the "Quick Patent Program" was begun in 2013, with the main objective being guidance and advice, free of charge to those interested in applying for a patent, in the proper preparation of applications for patents or utility models for effective process before Indecopi.
- Course on Intellectual Property and Patents: In Peru there is a small number of courses on intellectual property and patents in academic centers and careers in the basic sciences, engineering and even business (races have those students are taught to become in future researchers, scientists, inventors, innovators and entrepreneurs and Peruvian should know and be formed around the scope of intellectual property), so there is still a greater awareness of the importance of the patent system for academic teaching. For this reason, from 2013 courses have been launched in cooperation with the main public universities with the aim of educating about general concepts relating to intellectual property related to creations as a product of scientific or resulting creativity research and deepen especially those relating to the patent system.
- Electronic Technology Reports: Papers, regular and systematic, presenting information processing technologies, inventions, products and/or process patents in the public domain on issues related to different industries and/or sectors considered of national interest.
- Bulletin Invent, Patent, Innovate (IPI): Monthly publication that disseminates issues related to patents and other forms of intellectual property protection. The newsletter allows inventors to access various news options, news articles and various information considered relevant to the inventive and innovative activity.



³ SOLIS IPARRAGUIRRE, Silvia; OSORIO ICOCHEA, Mauricio. op. cit., pp. 317-321.,

- Thursday of Inventor: Free conferences that bring concepts, relevant information and guidance on different aspects and issues of the patent system to the community of inventors, researchers, entrepreneurs and others interested in this system.
- Annual National Convention of Patents and Inventions (CNAPI): Mega annual event organized since 2014 by Indecopi as a space that allows the demonstration and recognition of national inventive step, the encounter and interaction of local agents of invention and innovation, as promoting debate and knowledge transfer of the patent system.
- Advisory Service Patent and Trademark: Platform physically located in the central premises of Indecopi where guidance, assistance and free information are available during office hours to users regarding issues related to the application process, patent and patent system in general. The service became operational in 2015 and has optimized efficiency in promoting the system.

Between 2012 and 2015, the main achievements related to the patent system are⁴:

- Increased coefficient invention of Peru (number of national applications per 100,000 habitants) to 0.76 annual average between 2012-2015. It should be noted that between 1990 and 2011 the average annual national invention coefficient was 0.36. This means that between 2012 and 2015 the average growth was 111% over the 22 preceding years.
- Growth in the number of patent applications by Peruvian universities of 2.23 annual average between 1990-2011 to 38.75 requests annual average between 2012-2015. This means that between 2012 and 2015 the average growth of national patent applications was 1.638% over the 22 preceding years.
- The number of patent applications by Peruvian companies grew from an annual average of 25.95 between 1993-2011 to an annual average of 41.25 requests between 2012-2015. This means that between 2012 and 2015 the average growth of national patent applications was 59% compared to the 19 previous years.
- An increase to annual average of 234 national patent applications between 2012-2015. It should be noted that between 1990 and 2011, an annual average of 94 national patents were requested. This means that between 2012 and 2015 the average growth of national patent applications was 149% over the 22 preceding years.

All actions by the DIN to promote patenting are resulting in a significant evolution in the behavior of the direct actors of innovation with respect to its relationship with the patent system. The achievements and progress made will continue in the coming years which allows for a very good panorama for the future of the patent system in Peru.

⁴ SOLIS IPARRAGUIRRE, Silvia; OSORIO ICOCHEA, Mauricio. Op. cit. pp. 323-324. Update Source: DIN.

REFERENCES

- http://www.wipo.int/portal/en/index.html
- https://www.indecopi.gob.pe/web/indecopi_ingles
- PERUVIAN PATENTED INVENTIONS AND MARKETING SUCCESS. INDECOPI, Lima, 2014.
- SOLIS IPARRAGUIRRE, Silvia; OSORIO ICOCHEA, Mauricio. "Towards the implementation and use of the tools of Decision 486: Indecopi and its role in promoting Patenting in Peru". In: Symposium on the Andean Regime of Industrial Property, 15 years of Andean Decision 486. Superintendence of Industry and Trade of Colombia. Bogotá, August 2015.



Messages from Committee of Human Resource Development & Lecturers

The Four Secrets to Revitalizing Small Manufacturing Companies -- M_P_D_P exemplified in Neji-saurus GT development



Mr. Mitsuhiro TAKASAKI

Mr. Mitsuhiro TAKASAKI President, ENGINEER INC.

Our company is a work tool manufacturer with 33 employees. My father and uncle started the business in Osaka in 1948, during the golden era of radio, and we have continued to engage in manufacturing work tools for professional use that are required in the electronics industry, such as long nose pliers, nippers, screw drivers, and soldering iron. We often conduct design and assembling works in-house. However, we complete our products by tying up with excellent processing companies nationwide for metal processing, plating, thermal treatment, etc. I worked for a shipbuilding company for 10 years after my graduation from university. I entered our company in 1988 to take over our family business. Since then, I have engaged in the development of new products for over 20 years, and I had launched about 800 new products by the time I assumed the post of president in 2003. Some sold moderately, but others did not get any distribution. The days when I groped blindly in the dark with no understanding of how to make a hit product continued for a long time. As the economy was not so bad at that time, our company's business did not go down even if we made unsellable products.

However, our sales significantly decreased due to the collapse of Lehman Brothers in 2008, and we entered a period in which we had difficulty in maintaining our business operations. We had to do something, so in 2009 we developed the fourth-generation of a series of pliers called "Neji-saurus," which enable people to easily remove stripped screws. This generation is called Neji-saurus GT, and it became a phenomenal major hit product compared to the previous three types of Neji-saurus. We thought that we could overcome the effects of the collapse of Lehman Brothers with this hit product. However, rather than simply being pleased, we calmly evaluated how we successfully developed this hit. We believed that we could make use of the results of our evaluation for our next development. As a result of the analysis of the factors of this success, we learned that four secrets, namely, MPDP (marketing, patent, design, and promotion), are the key success factors (KSF). Therefore, we are practicing our unique "MPDP theory." Since then, we have continued to develop new products based on the MPDP theory, and have created one unique product after another, such as Tetsuwan scissors GT, the fifth- and sixth-generation of Neji-saurus, and Neji-bazooka.

As the MPDP theory is for revitalizing small and medium-sized enterprises, I have recently come to have increasing opportunities to talk to foreign people concerning our efforts relating to intellectual property, in-house education, etc. Since 2013 I have been in charge of a lecture on the subject of "intellectual property management at small and medium-sized enterprises" every year at an approximately week-long international training workshop at APIC attended by intellectual property office staff members and patent-specialized practitioners of

43

developing countries in Asia, Africa, etc. Since 2014 I have been delegated as a committee member of this workshop, and have expressed my opinions as a representative of a small and medium-sized enterprise. In addition, I have also participated in the ASEAN-Japan Public-Private High-Level Dialogue on Intellectual Property held in Kyoto, and the Japan-China-Ko-rea International Symposium on Intellectual Property held in Beijing.

What I always recall from such interaction with foreign people is "3%," a numerical value which I heard from a staff member of the Mexican Institute of Industrial Property six years ago. This is the percentage of patent applications filed by local companies in Mexico. In other words, 97% of patent applications filed in Mexico are filed by entities in other countries, such as the United States, European countries, and Japan, meaning that the establishment of an intellectual property system has not made much contribution to the fostering and development of the Mexican industry. I believe that it is very meaningful that the JPO, JICA, and other organizations are actively providing various types of support and cooperation for the purpose of promoting the development of an intellectual property system in developing countries. However, I also believe that such support will be more appreciated by the recipient countries if it is accompanied or even somewhat belatedly followed by support for increasing the percentage of patent applications filed by local companies, as much as possible.





Column: The "Curse" is Pressure



Mr. Takao OGIYA, Director General of APIC

Mr. Takao OGIYA

The 2016 Rio Olympic Games ended with Japan taking home a record haul of 41 medals: 12 gold, 8 silver, and 21 bronze. Japan's Olympic athletes brought us a great deal of excitement in a variety of events. As I write this article, the Paralympic Games are underway, and the Paralympians are bringing us yet more exciting and moving moments. I would like to express my deep appreciation and respect for all of the athletes who participated in these two great events.

During these Olympic Games, I heard repeated references to a "curse" on the Olympics. It is true that results at the Olympic Games are often unpredictable. Top athletes who are expected to win medals sometimes make unthinkable mistakes or fall ill immediately before their events. Anxiety may be one of the reasons for the unpredictability of the Olympics. The fact that the Olympics are held only once every four years places the athletes under unusually intense pressure. Some experience intense anxiety, which can lead to a loss of muscle control and other stress-related disorders.

The "curse" is pressure. Everyone experiences pressure regardless of whether he or she is an Olympic athlete. For example, my wife is taking swimming lessons. One day, she was taking a test to get a Grade 3 qualification in freestyle swimming. She would qualify by swimming 50 meters within 60 seconds, which was narrowly within the limits of her abilities. On the day of the test, although she was visibly nervous, she set a personal best of 58.5 seconds and passed the test. After the test, she was too tired to lift herself out of the pool. She had no energy left in her arms and legs after swimming only 50 meters. Thus, pressure can be a doubled-edged sword: it likely allowed my wife to set her personal best, but it may also have caused her extraordinary fatigue.

On the day Masayoshi Son founded SoftBank Group, he made a speech to his then small number of part-time workers. He stood on a small wooden box and declared, "Our company will record sales of 10 billion yen within 5 years, 50 billion yen within 10 years, and 1 trillion yen in the future." He put pressure on himself and ran his business aggressively. In the business year ending in March 2016, SoftBank Group's consolidated sales exceeded 9 trillion yen.

Pressure can help you achieve more than you ever thought possible. This may explain why world records are more likely to be set at the Olympics than at other sporting events. The key is how to manage pressure. People feel pressure when their goals exceed their current capabilities, forcing them to improve. Striving to improve and achieve goals gives people the confidence to face future challenges. The Olympics are the ultimate goal for many athletes. The high expectations from others makes athletes' goals seem unattainable, causing them extreme anxiety.

In order to manage pressure, some people strain to force the anxiety from their minds. However, no matter how great their efforts, the underlying anxiety remains, gaining monstrous power that can cause a person to lose control. Other people manage pressure by concentrating on process. Anxiety results from the fear of a disappointing result. The basic impossibility of completely controlling a future outcome means that it is also impossible for people to control whether they experience anxiety. However, people can control processes, and in so doing, their behavior in response to anxiety. By concentrating on your behavior, you can stop feelings of anxiety from controlling you.

Ichiro Suzuki, the legendary MLB player, is famous for his batter's box ritual, which he has performed at the same speed and sequence throughout his career. This routine enables him to concentrate on his job. He gains a sense of control over his movements, giving him confidence and allowing him to consistently deliver great performances. This routine helps him to be himself despite the pressure imposed on him by the environment and the people around him. I can only imagine his joy and satisfaction in having developed this ability to perform exceptionally well in adverse circumstances.

Our daily lives do not involve the levels of anxiety experienced by Olympic athletes, but no one is immune to pressure. You can use pressure to boost your performance, but only if you concentrate on your behavior rather than on suppressing your anxiety. If you can do that, you should feel good about yourself, because you will have transformed pressure from that "curse" into a friend and motivator.





Selection from TOP 100 Japanese Innovations of "Automatic Ticket Gate System"

Outline

Rush-hour congestion had become a serious social problem by the 1960s due to the large number of commuters in Japan's large cities. Train station workers were still punching each ticket by hand despite facing a throng of passengers at each gate. Efforts to relieve congestion through improved worker performance were limited in effect.

The automatic ticket gate system was first introduced at Kitasenri Station on the Keihanshin Express Railway (currently the Hankyu Railway). This system allows a passenger to place a ticket into the ticket insertion slot of an automatic ticket gate and retrieve it from the take-out slot within 0.5 seconds. Within this short period of time, the automatic ticket gate processes a complex array of information, including departure time, boarding and exiting stations, fare and validity period.

The system spread rapidly, first within the Kinki region and gradually throughout Japan. The introduction of automatic ticket gate systems has significantly improved gate congestion and dramatically reduced the time station workers have to spend at gates, resulting in substantial cost savings. IC cards and other technological advances in recent years have made automatic ticket gate systems even more convenient for passengers. In 2007, the Institute of Electrical and Electronics Engineers, Inc. (IEEE) commemorated the development of automatic ticket gate systems by naming them an "IEEE Milestone."

Train companies were not solely responsible for the research and development which led to automatic ticket gate systems. The cooperation of universities and private manufacturers was indispensable. The following section describes the history of the development of automatic ticket gate systems and the relevant technical issues.

Background to the innovation

(1) Train station congestion and automatic ticket gate systems

Japan was undergoing rapid economic development in the early 1960s. At major train stations, the rush-hour congestion at station gates reached extreme levels. Train tickets of the



Automatic ticket gates installed in the Hankyu Railway's Kitasenri Station Images provided by OMRON Social Solutions

time had to be physically punched by station workers. Their efficiency reached its natural limits, and the areas around the gates were constantly crowded.

It was difficult to increase the number of station workers assigned to the gates. For a railway company, which needs to cover rising personnel costs, the simplest method would be to raise fares. However, this would have required government approval by a Diet that would have been reluctant to raise fares due to public opposition.

In response to these issues, Kintetsu Railway ("Kintetsu") and other major train companies began discussing the possibility of solving the problem of train station congestion with an automatic ticket gate system. In February 1964, Kintetsu established a study group tasked with the development of an automatic ticket gate system and commenced joint research with Osaka University. Tateishi Denki (currently OMRON Corporation (name changed in 1990), hereinafter "OMRON"), an equipment manufacturer, joined the project in September 1964.

First, on a trial basis, engineers made an automatic ticket gate specifically for commuter passes. In Japan, the holder of a commuter pass is allowed to exit at any station along the commuting route. In order to produce an automatic ticket gate to handle commuter passes, it was necessary to solve two engineering issues: (a) assign a code to a commuting route using a minimum number of bits and (b) expedite the process of determining whether the boarding station or the exiting station is on the commuting route. These technical issues could not have been solved without a breakthrough made by Osaka University in the field of graph theory.ⁱ

A certain degree of theoretical success was achieved through the efforts of Kintetsu and Osaka University. However, in order to make the technology practical, it was necessary to increase the processing speed. To tackle this challenge, the engineers decided to make more prototypes to determine the basic functions and structure.ⁱⁱ (2) OMRON's efforts

OMRON was a midsize equipment manufacturer founded in 1933. One of their major businesses at the time of the development of the automated ticket gate system was the production of automation equipment. As the market for automation equipment expanded, OMRON established the Central R&D Laboratory in 1960 to strengthen their product development capabilities. In 1961, in the wake of the "Chi-37 Case" (the discovery of a large number of counterfeit 1000 yen notes), OMRON successfully developed a counterfeit note detector within a short period of time. This achievement was featured in an industrial paper, leading to the conclusion of an automatic ticket gate system joint development agreement between OMRON and the Railway Technical Research Institute.ⁱⁱⁱ

In order to not slow a passenger's walking speed, an automatic ticket gate system must be able to continuously handle 60 to 80 passengers per minute and convey a ticket or commuter pass from one side of the gate to the other within 0.6 seconds. To achieve this goal, four requirements must be met: (i) the ticket insertion and removal slots must be conspicuously positioned and have user-friendly shapes; (ii) it must be possible to insert a ticket or commuter pass from either side of a ticket facing either up or down; (iii) a ticket or commuter pass must be conveyed to the other side of the gate within 0.6 seconds; and (iv) tickets and passes can be inserted continuously. Although OMRON, a manufacturer of machine parts, lacked experience in the manufacture of machines of this type, the development team members carefully conducted on-site research and gathered data to identify and solve the problems posed by an automatic ticket gate system.

In 1965, engineers introduced an experimental prototype. OMRON faced various ongoing technical challenges, such as the development of technology to align and convey tickets. By 1966, OMRON had successfully developed an automatic ticket gate capable of conveying a

commuter pass from the insertion slot to the take-out slot without errors. However, Kintetsu was forced to abandon its plan to introduce an automatic ticket gate system the same year when it was unable to reach an agreement with the former Japan National Railways that would have allowed the automatic ticket gate system to seamlessly handle the commuter passes of both railway networks.^{iv}

(3) Commencement and improvement of the system

After Kintetsu's withdrawal from the project, OMRON made sales overtures to other railway companies and worked continuously to solve the remaining technical problems. In 1967, they were finally allowed to install a prototype for testing purposes at Kitasenri Station on the Keihanshin Express Railway (as it was then named).^v Kitasenri Station was the station closest to Senri New Town, a major new residential development under construction at the time, and was in the area where Expo '70 would be held. The automatic ticket gate system would form a part of a sophisticated, modern railway suitable for a new major residential development in Japan.^{vi}

In March 1967, the commercial operation of the automatic ticket gate system commenced with the installation of newly developed ticket gates capable of handling regular tickets in addition to protocols developed specifically for commuter passes. However, a great deal of confusion accompanied the introduction of the system. For example, many passengers mistakenly inserted regular tickets into the slot specifically for commuter passes or inserted paper money, coins, or commuter pass cases directly into the slot. Also, the ticket gate often closed before passengers carrying large objects could pass through.

During the process of developing automatic ticket gates capable of accepting both commuter passes and regular tickets, many discussions were held to solve the issue of how to record information on a regular ticket, which is much smaller than a commuter pass. Conventional punch card techniques were inadequate. Engineers needed to develop a new technique. It was not easy to find a means of instantly reading complex data recorded on a ticket and making the necessary judgments. The engineers participating in these discussions finally came up with the idea of using a technique still in its infancy: digital signals recorded on magnetic tape. The aforementioned problem was solved by equipping each automatic ticket gate with simple judgment functions.

(4) Evolution of automatic ticket gates

After the successful introduction of an automatic ticket gate system at Kitasenri Station, many stations (mostly those of Kansai private railway companies) began introducing the sys-



Kitasenri Station on the Hankyu Railway: Images provided by OMRON Social Solutions

tem. By the end of 1975, all of the major private railway companies and the Osaka Municipal Subway had introduced automatic ticket gates. However, the Kanto region railway network's complex mixture of railway systems of many railway companies presented a much greater obstacle to the introduction of automatic ticket gates. The number of stations adopting automatic ticket gate systems gradually increased. In the first 30 years after the introduction of such systems in 1967, about 20,000 automatic ticket gates were installed throughout Japan.^{vii}

The Congress of Japan Railway Cybernetics (CJRC) promoted the standardization of magnetic cards, and eventually established magnetic standards in May 1971. These standards provided a technical basis for the wide use of magnetic card-type automatic ticket gates. In 1990, the CJRC established new magnetic standards that significantly increased memory capacity, enabling the magnetic recording of complex transit information. As a result, commuter passes and regular tickets became usable across multiple railways. In 2001, the Suica IC card was released by Japan Railway East in the Tokyo metropolitan area, adding to the ever increasing sophistication of the automatic ticket gate system.

Outline of innovations and technological developments

This section briefly describes the graph theory invented by Osaka University, which provided the theoretical basis for the automatic ticket gate system^{viii}, and outlines OMRON's technological developments.^{ix}

- Theory

Osaka University's theory was intended to solve the following two engineering problems: (a) encoding commutation routes using the minimum possible number of bits and (b) accelerating the process of determining whether the boarding or exiting station is on the commuting route. This requires conceiving a route on a railway network as a linear graph. Problems (a) and (b) then "boil down to encoding every route that does not go through a given node in a given graph, making the determination of whether a given node or branch exists on the designated route mechanically easy." The essence of the theory lies in the following two points: (1) the commuting route was expressed by indicating the codes of the stations at both ends of the route and the cotree branches through which the route passes and (2) the determination of whether a certain station exists on the commuting route is made by determining "whether the station exists on a route on the tree" and "whether the station exists on the fundamental pattern determined by the cotree branches that overlap with the commuting route."^{xi}

- Ticket alignment technology

The ticket alignment technology needs to be so accurate that tickets can be aligned with an accuracy of $100 \,\mu\text{m}$ or less. This was one of the major challenges of this project. Various conveyers were used on a trial basis to identify the merits and demerits of each design. Eventually, eccentric roller technology was adopted.

- Ticket conveyance technology

To improve ticket conveyance technology, experiments were repeatedly conducted to find a conveyer belt capable of high speed operation. At the time of the automatic ticket gate system's initial development, a flat conveyor belt was used merely for the purpose of providing power. Based on the technology used in car stereo equipment flywheels, engineers first created a structure to convey tickets by sandwiching them between a drum and a flat belt. Engineers initially used a cold rolled steel sheet to make the guide frame, and subsequently changed this to an aluminum-based material. However, engineers faced contortion, distortion and running surface abrasion issues. Engineers used Shimadzu Corporation's machines to resolve the first issue, and anodized the frame to resolve the second.

- Information reading technology

Magnetic heads were the most important component of the ticket information reading technology. At the time of the development of the automatic ticket gate system, magnetic heads were being produced by only a few audio equipment manufacturers and one division of a large electronics manufacturer.

The information reading head developed by OMRON was designed to function in concert with a ticket punching machine. The punched ticket was conveyed to the exit side of the gate to trigger the opening or closing of the gate bar.

- Gate bar technology

The decision to open or close the gate bar was made by a light sensor that was installed at the entry side of the gate to detect passengers. However, the sensor was unable to differentiate between baggage and passengers, causing it to malfunction repeatedly. Engineers conducted many tests by having passengers pass through the gates. Based on the data obtained from the tests, the engineers discovered that some space always exists between passengers and successfully invented a sensor that could instantly distinguish between baggage and passengers.

- Control circuit technology

Among the various automatic ticket gate system-related technologies, control circuit technology has changed to the greatest extent. Initially, a semiconductor circuit was made by combining transistors with diodes. At the time of the development of control circuit technology, IC technology was already known, but was initially unsuitable for practical use due to a noise problem. Even after the adoption of IC technology, many failures occurred, which various measures had to be taken to prevent. The foundations of the current station administration system were laid during the development of microcomputers for calculators. Today, information is sent by an automatic ticket gate's built-in computer to the railway system's central computer and not merely to certain station equipment.

(Notes)

- The company names, product names, etc. used in this article are trademarks or registered trademarks of the relevant companies.

- Parts of company names, such as Co., Ltd., etc., have been omitted.

- Honorific titles have been omitted.

(Endnotes)

i Isao Shirakawa, "IEEE Milestones monogatari --- Kansaiga unda inobēshon o chūshin ni shite ---" (IEEE Milestones story --- Innovation made in Kansai ---), IEICE, Engineering Sciences Society: Fundamentals Review, Vol. 5, No. 1, pp. 10-19

(2011) [https://www.jstage.jst.go.jp/article/essfr/5/1/5_1_10/_pdf] (last accessed on March 11, 2014)

- ii Akio Shibashi, Jidou kaisatsu no himitsu (Secret of an automatic ticket gate system) (Seizando Shoten Publishing, 2005), p. 41
- iii Tateishi Denki, *Tsukuru sodateru --- Tateishi Denki 55 nen no ayumi* (Foundation and Growth the 55 year history of Tateishi Denki) (Tateishi Denki, 1988) p. 115
- iv Shirakawa, op. cit., footnote 1, p. 14
- v Tateishi Denki, op. cit., footnote 3

- vi Hankyu Hanshin Holdings, *100 nen no ayumi (Bumonshi)* (100 Year history (for each department)), (Hankyu Hanshin Holdings, 2008), p. 301
- vii Nagaomi Seki, Nobuo Kageyama, Masao Yamazaki, "Saikin no shutsukaisatsuki no shinpo" (Recent Development of Automatic Ticket Gates), Journal of Advanced Mechanical Design, Systems, and Manufacturing, Vol. 82 (1970), p. 24
- viii Shirakawa, op. cit., footnote 1, pp. 10-19, and Isao Shirakawa, Tadao Kasami, Hiroshi Ozaki, Hiroki Oda, Kazuo Inoue "Teiki joushaken no jidoukaisatsu ni okeru tsūyōkeiro no hugou-kamondai: Gurahu ni okeru mishi no hugouka mondai" (Issue of Encoding Commuting Routes Recorded on Commuter Passes to be Processed at Automatic Ticket Gates: Issue of Encoding a Route in a Graph), Jouhou Shori, Vol. 6, No. 2 (1965), pp. 81-88
- ix OMRON, "Jidou kaisatsuki eno chousen" (Efforts to Invent Automatic Ticket Gates), (OM-RON, 2008)
- x Shirakawa, etc. op. cit., footnote 8, p. 81
- xi Shirakawa, op. cit., footnote 1, p. 13 Other references

- OMRON, *Jidou kaisatsuki eno chousen* (Efforts to Invent Automatic Ticket Gates), (OM-RON, 2008)



Happenings in Japan (Four-Flame Cartoon)



53

Editor's Note



Good afternoon. This is Mitty.

It feels like winter has finally arrived in Japan. In the evening the air is very clear and we can see a lot of beautiful stars. It looks just like fireworks have been shot into the night sky.

Now I would like to turn your attention to "automatic turnstiles." Reduction in the crowding at wickets has been possible by the implementation of automatic turnstiles, allowing for the easy use of train passes and cards that the turnstiles can use to automatically calculate and deduct fares.

Although automatic turnstiles are now considered the standard in and around most cities of Japan, it is still nostalgic to remember previous times when station attendants had to manually punch the ticked of each passenger. There was an art to rhythmically punching tickets, and many children dreamed of becoming a station attendant. And I remember always greeting the attendants as I had my ticket punched while passing through the wicket.

Recently there has been a reduction of train conductors with the introduction of "One Man Operation" trains, as well as the increase of automatic recorded announcements of train arrivals.

I feel that as life becomes more convenient and more and more things become automated, communication between people tends to decrease. For example, prior to the invention of the washing machine, people used to gather around the water well to wash clothes, and of course chat. In Japan we call this "water well gossip." In recent years a great number of people depend on their cell phone as their main communication tool. I now see an increase of people staring down at the screens of their smart phones on the trains.

The convenience of automation may be making our lives much easier, however we must be careful not to become too dependent on it. We must continue to improve our abilities and skills, and remember to communicate directly with our family, friends and colleagues.



Hello, I am Chiho Omori with APIC.

With the arrival of November, Tokyo has become quite cold. I myself get cold easily and therefore prefer the heat of summer. However, when we speak of November, we think of the season of autumn colors. One of the attractions of this season is that there are various places in Japan where we can view the beautiful autumn colors. Walking beneath a row of amber colored ginko trees, we can once again feel the beauty of the four seasons of Japan.

In November we also have the children's festival called " $7 \cdot 5 \cdot 3$ " (shichi-go-san). In this festival we celebrate children reaching the ages of 7, 5, and 3, and many people will pay a visit to a shrine or temple. Children will dress in traditional clothing such as "kimono" for girls, and "hakama" for boys. Children are of course not used to wearing such clothing, and they are quite cute walking in very short quick steps. " $7 \cdot 5 \cdot 3$ " is also celebrated with the passing out of long, red and white candy sticks called "chitose ame." "Chitose" means "1,000 years old," and this candy represents our desire for our children to live a long time.

During your visit to Japan this November, we hope that you will all be able to experience the traditional autumn culture of our country.

Publication of this Magazine is consigned to the Japan Institute for Promoting Invention and Innovation by the Japan Patent Office.

[Consigner]



Japan Patent Office(JPO) Address: 4-3, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo 100-8915, Japan Telephone/Facsimile: 81-3-3503-4698 / 81-3-3581-0762 (International Cooperation Division) Web site: http://www.jpo.go.jp/index.htm



Asia-Pacific Industrial Property Center(APIC), Japan Institute for Promoting Invention and Innovation (JIPII) Address : 4-2, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo 100-0013, Japan Telephone/Facsimile: 81-3-3503-3026 / 81-3-3503-3239 Email: apic-jiii@apic.jiii.or.jp Web site: http://www.training-jpo.go.jp/en/

