Draft Japan's interventions in SCP33 (6-9 December, 2021)

5. Report on the international patent system: Certain aspects of national/regional patent laws

First of all, the delegation of Japan would like to express its gratitude to the Chair and the Secretariat for their dedication and efforts in organizing this meeting under the difficult circumstances caused by the COVID-19 pandemic.

As described in working document SCP/33/3, in this agenda item, we are to share various aspects of patent laws with each country. Taking this opportunity, the delegation of Japan would like to share information on the recent revisions of the Patent Act of Japan.

Japan Patent Office (JPO) has been advancing digitalization of communications with users, in order to cope with the current situation under the pandemic. In May of this year, Japan revised Patent Act and other related Acts to respond to changes into digitalization of the social structure. This includes making a web conference system available in oral proceedings for trials or appeals.

For the specific details of the legal revisions in Japan, please see the English version on JPO's website (https://www.jpo.go.jp/e/system/laws/rule/hokaisei/document/tokkyohoutou_kaiei_20190521/outline.pdf).

7. Quality of patents, including the opposition system

The delegation of Japan aligns itself with the statement delivered by the distinguished delegation of France on behalf of Group B.

This delegation supports the proposal by the delegation of the U.S. for an information exchange on expedited patent examination mechanisms at intellectual property offices.

Expedited patent examination is beneficial for users who wish to obtain rights early. The Japan Patent Office (JPO) offers various forms of expedited examination such as accelerated examination and super accelerated examination to enhance users' convenience.
It would be very beneficial both for the development of the IP Offices and for the convenience of the users to share the experience of each IP Office's expedited patent examination system and to enable users to refer to such information.

<Japan's presentation at the Sharing session by Member States on the use of artificial intelligence for examination of patent applications. >

Today, I'll talk about the utilization of AI at JPO.

At first, I will talk about the purposes for the JPO's using AI in its business operations.

In recent years, with the advancement and growth in the complexity of cutting-edge technologies, examiners need to deal with technological advancements.

Also, due to the growing number of applications being filed worldwide, the scope of prior art searches is continuing to increase.

In addition, an essential issue for the JPO is finding ways to pass on the expertise needed to examine complicated examination works from experienced examiners to new examiners.

Under these circumstances, we find that there are rapid advances taking place in technologies such as machine learning, natural language processing technology, and deep learning. And, some of these technologies are anticipated to be used in our business operations.

So, the JPO started an initiative to consider the best possible use of AI technology for its business operations.

Our ultimate goal of using AI technology is to solve various issues that the JPO needs to deal with, so as to conduct higher-quality and more efficient business operations.

We hope to improve our services to users and the work style of our employees as a result.

The JPO has been considering using AI in accordance with its action plan since 2017.

The action plan was revised in 2021 based on the results of a review conducted in 2020.

The JPO has identified four projects for patents, two projects for trademarks, and one project for design.
Today I'll explain the projects for patents.

First of all, I'll speak about the patent-classification project.

JPO examiners use FIs and F-terms, which are JPO-specific search indexes, to retrieve domestic patent documents.
And these indexes are useful to retrieve relevant documents to Japanese applications.

But, these had not been assigned to foreign patent documents before.

So, we started assigning FIs and F-terms to foreign patent documents. Machine learning, basically a support vector machine, is used to achieve this.
Now JPO examiners can conduct collective searches on both Japanese and foreign documents with the indexes.

The next topic is the project to expand search query terms.
As I said in the first slide, an essential issue for the JPO is finding ways to pass on the expertise needed to examine complicated examination works, from experienced examiners to new examiners.

We proposed to suggest the clue to expand search query terms as a solution. The suggestion system displays relevant classifications and expanded keywords, that is, synonyms.

This system is trained based on the knowledge and the experience of experienced examiners in advance.
In this way, we can accumulate knowledge about classifications of relevant technologies and a rich variety of synonyms.

Utilizing this system, new or reassigned examiners can select better classifications and keywords when conducting their examinations.

Next I'll explain about the patent image search project.

Sometimes drawings contain very important information, especially regarding shapes or structures of things. But text search queries are not so effective to retrieve such useful drawings.

We implemented 2 approaches to solve this issue.
Both approaches use the information originated from drawings of the application.

The first approach is to narrow down the retrieved drawings by using keywords.

The idea is to embed the specific keywords to patent drawings in advance so that examiners can narrow down the drawings with them, i.e. they don't need to check out unimportant drawings.

The second approach is to re-rank the retrieved drawings by similarity to the query drawing.
Examiners don't need to check out unimportant drawings. This is the same as the first approach because they can determine which are important drawings based on the order of the drawings.

At last, I'll talk about the project to display rankings of patent documents.

Examiners had to read hundreds of documents to retrieve just one relevant document. It wasn't effective. So we started re-ranking the retrieved documents by using the machine-learned model.

The main point of this re-ranking is to learn model based on examination results.

The documents cited by examiners are thought to be important for and relevant to the examined application.
The models are trained to predict higher scores for the cited documents than others.

By creating and implementing these projects, the JPO is working to achieve our ultimate goal of using AI technology to solve various issues that the JPO needs to deal with, so as to conduct higher-quality and more efficient business operations.

8. Patent and health

The delegation of Japan supports the view of JIPA and JPMA that the existence of IP promotes both innovations and alliances.

This delegation believes that financial incentives for developing new drugs encourage more R&D activities and benefit people around the world. Therefore, appropriate protection of intellectual property rights is critical to providing inventors with incentives to develop innovative medicines and devices, which saves millions of lives throughout the world.

Therefore, this delegation is convinced that this issue could be dealt with more effectively by taking a more comprehensive approach in responding to the various factors, while also giving due consideration to the positive effects of the patent system.

9. Confidentiality of communications between clients and their patent advisors

The delegation of Japan supports the opinion of the Japan Patent Attorneys Association (JPAA) that the confidentiality between clients and their patent advisers is an important legal concept and that discussions on this matter should be continued at the SCP sessions, in which all member states would participate.

WIPO member states should listen carefully to the opinions of users in order to advance discussions for the benefit of users worldwide.

10. Transfer of technology

The delegation of Japan aligns itself with the statement delivered by the distinguished delegation of France on behalf of Group B.

Japan strongly supports WIPO GREEN's initiatives to contribute to the promotion of innovation and technology transfer in order to help solve global challenges.

Since Japan has the world's largest number of WIPO GREEN users and partners, we can significantly contribute to its development. The Japan Patent Office (JPO) has expanded the WIPO GREEN network by working with WIPO and stakeholders around the world, and supporting its activities through voluntary contributions.

For example, JPO has begun supporting an Acceleration Project in Latin America this year utilizing the Funds-in-Trust Japan Industrial Property Global. JPO is interested in producing concrete best practices, and presenting them to the world. This also brings more attention to WIPO GREEN, increases the number of participating companies, produces more best-practices, and enables WIPO to achieve the SDGs. We hope that this support will further encourage the matching of green technologies to existing needs in Argentina, Brazil and Chile, which are targets of the Acceleration Project and produce best practices.

Furthermore, JPO held a joint symposium with WIPO in June on WIPO GREEN's initiatives that facilitate the advancement of green technologies around the world. During the symposium's panel discussion, panelists discussed the initiatives, current status, challenges, and future development of WIPO GREEN from various perspectives based on their concrete and practical experiences.
Utilizing WIPO GREEN, JPO will contribute toward the promotion of innovation and technology transfer in environmental technology, and will continue striving to improve the IP landscape within which to help solve social issues.