Overview of the TM5 Image Search Project Experts Meeting

1. Place and Time

Venue: FUKURACIA YAESU (Address: 2-4-1 Yaesu, Chuo-ku, Tokyo)
On November 8 (Wed) and 9 (Thu), 2017

2. Participants

Participants from the TM5 Offices:

JPO: Mr. Izuru Hanaki, Director-General of the Trademark and Customer Relations Department (Opening speech); Mr. Sunao Sato, Director of the Trademark Division; Mr. Naoaki Akaboshi, Director of the Electronic Trademark Examination System Planning and Coordination Office of the Trademark Division; Mr. Kazuyuki Takano, Director for Trademark Examination Planning; Mr. Toshiaki Seto, Deputy Director of the Trademark Policy Section of the International Cooperation Division; Mr. Jun Watanabe, Deputy Director of the Examination Promotion Planning Section of the Trademark Division, etc.

EUIPO: Mr. Miguel Olivares, Project Manager of the European Cooperation Service; and Mr. Christophe Gimenez, Team Leader of the International Cooperation Service

SAIC: Ms. WU Qin, Deputy Director of the IT Division of the Trademark Office

USPTO: Mr. Greg Dodson, Deputy Commissioner for Trademark Administration; and Mr. Glen Brown, Trademark IT Advisor

WIPO: Ms. Mona Remlawi, Head of the Brand and Design Database Section, Global Databases Division, Global Infrastructure Sector

Keynote speech: Dr. Hidenori Sakanashi (Engineering), Chief Senior Researcher of the Artificial Intelligence Application Research Team at the Artificial Intelligence Research Center

Companies: NTT DATA Corporation
Hitachi, Ltd.
Clarivate Analytics (Japan) Co., Ltd.
TrademarkVision
Beijing Huazhi Jingwei Technology Co. Ltd.

3. Background and Objectives

The Image Search Project is one of the TM5 Cooperative Projects, for which the Japan Patent Office (JPO) serves as the lead office. The objectives of this Project are (1) to define issues and possible solutions for development and implementation of an image search system for figurative trademarks; and (2) to create and share successful achievements, which will be useful for the Offices toward introducing an image search system.

This Experts Meeting was the second meeting since the first one in March 2014. The participants shared information on and actively discussed various issues on image searches, including the recent activities of each TM5 office, and the latest technological trends in private companies. This meeting provided useful and effective information for the participants to consider introducing an image search system at each Office.

4. Overview of the Meeting

(1) Keynote Speech

Dr. Sakanashi delivered a keynote speech on the latest technological trends in image search systems. They included: fundamental methods and outline of technologies for conducting figurative-image searches; artificial intelligence (AI) technology and examples of utilizing AI technology in image searches; and issues on and the feasibility of using technologies for conducting image searches in trademark examinations.

(2) Introduction of "Global Brand Database" by WIPO

Ms. Mona Remlawi from the World Intellectual Property Organization (WIPO) made a presentation on the "Global Brand Database" that is provided on the website of WIPO. She introduced the ways to search figurative images and its mechanism, which was developed internally by using open sources. Also, she mentioned that outsourcing the development and operation of image search systems to third parties is required to consider any risks, such as the disruption of service system after it was released. She suggested combining image search technologies and the current search systems based on the International Classification of the Figurative Elements of Marks or the Vienna Classification.

(3) Recent Activities for Image Searches at TM5 Offices

The TM5 Offices made presentations on the current state and progress for introducing image search systems. The Offices were in common in terms of considering possible uses of AI technology in image searches and possible combination with the current search queries based on the Vienna Classification and the like.

The details of the presentations made by the TM5 Offices are as follows:

Mr. Ippei Takeya from the JPO introduced the current state of JPO's initiatives for conducting image searches on figurative trademarks and the overview of a study that the JPO is conducting in this fiscal year to validate its systems with AI technology in searches on prior figurative trademarks, as well as its future visions for further development. Other Offices showed interests in the study to eliminate noise in search results, i.e. a study to validate the JPO's system as to whether unnecessary search results can be eliminated by using image search technology. Also, the Offices were interested in the JPO's study to validate how AI can be used in its other business operations.

Mr. Miguel Olivares from the EUIPO introduced its eSearch plus database service and the details of the recent study on image searches. The EUIPO shared issues with participants that were found during the study, such as a fact that private companies basically do not want to provide their internal data to many commercial database and difficulties in gaining cooperation from IP experts for the databases. Also, the participants showed interests in the EUIPO's strategic approach to advance studies for image searches with users.

Ms. WU Qin from the SAIC introduced the history of its Trademark Office (CTMO), the current work flows, trends in trademark applications filed in China, and future directions of its initiatives for improving the efficiency of examinations. The participants showed interests in specific schedule for introducing an image search system and in what companies the SAIC is collaborating with.

Mr. Greg Dodson and Mr. Glen Brown from the USPTO introduced its initiatives on the utilization of big data and AI in its business operations, as well as its direction to achieve machine learning. They also talked about issues on how to handle privacy and personal information as well as confidential information, and about its future plan to handle a huge amount of data by using big data technologies. The participants were interested in whether or not the USPTO's future visions and these initiatives are being published.

(4) Presentations on Image Search Technologies by Companies
At the Meeting, companies from both Japan and foreign countries made presentations. Three Japanese companies, i.e. NTT Data, Hitachi, and Clarivate Analytics, and two foreign companies, i.e. TrademarkVision and Beijing Huazhi Jingwei Technology, explained the details of their image search technologies. During the question and answer session, active discussions were held on ways including how to establish database for image searches, how to search and analyze the database. In particular, the participants showed interests in the technical aspects, such as searching methods and the accuracy of image search systems, as well as in the operating practices, such as to whom image search systems are to be provided and the feasibility of their systems on a trial basis.

(5) Discussion
At the end of the Meeting, the participants discussed various issues on image searches and there, JPO persons, Mr. Akaboshi and Mr. Watanabe, worked as coordinators of the discussions.
Firstly, the participants discussed the presentations by companies, and then, discussed general issues on image searches, covering the entire Meeting.

Thanks to the fruitful presentations by companies, many participants were able to learn a lot about image searches. Also, the participants frankly exchanged meaningful ideas and information on points to be aware of when working on image searches, such as

ways for collaboration with companies, ways to manage data, and legal issues. As a result, the discussions provided very useful information for the participants to consider introducing image searches.

At the discussions on general issues on image searches, as a major direction of future initiatives, the participants basically agreed to continue working on activities involving image searches, mainly by using AI and the Vienna Classification.

Also, the participants discussed the following as their major issues:
- What the standards of similarity in image searches should be;
- To what extent the search results of figurative trademarks should be retrieved;
- Best possible ways for collaboration with companies, in order to avoid any creation of black boxes; and
- Need careful discussions on role sharing between AI and human activity in conducting examinations, although the use of AI may be useful as a means to improve the efficiency of examination.

Lastly, the Offices agreed to continue working on activities toward achieving an efficient and effective system for conducting searches on figurative trademarks at each of the Offices. They also confirmed the importance of continuing sharing the achievements with each other.

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