



Newsletter

21COE-WIN-CLS RCLIP

❖RCLIP Workshop Series No. 1

“An Observation

Concerning Claim Interpretation”

Ryu Takabayashi, Professor of Waseda University, Director of Research Center for the Legal System of Intellectual Property

RCLIP(Research Center for the Legal System of Intellectual Property) decided to hold a workshop series open to the public, in hopes to produce theoretical and practical results by providing cutting-edge IP research information, and by exchanging opinions actively with the participants. For the first several meetings, no theme will be specified, and an RCLIP internal researcher will present whatever subjects he/she is interested in. Next year, a consecutive lecture series is planned, going off of a single theme.

Participants can register for this workshop on our website (<http://www.21coe-win-cls.org/rclip/>).



For the first meeting held on July 13, 2004, Professor Ryu Takabayashi, Director of RCLIP, led the meeting with his report titled: “an observation concerning claim interpretation” and Professor Tatsuki Shibuya took the chair. So many people showed up in the meeting room, Room 514 of

Bldg 14, that additional chairs had to be borrowed from other rooms. The number of participants was 67 in total. They consisted of scholars, lawyers, patent attorneys, patent examiners and trial examiners of the Japan Patent Office, legal professionals at legal department of corporations, and students. It proved legal practitioners had much interest in the theme of the meeting.

In his speech entitled “an observation concerning claim interpretation”, Professor Takabayashi discussed the validity of a “flexible interpretation of claim terms”. This “flexible interpretation of claim terms” which Professor Takabayashi speaks of is where the technical scope of a patent invention can be determined through an operation where the applicant comprehends the extent to which he is allowed to handle which object is being claimed in a working example + equivalents, this being considered what by the Ball Spline case is the first requirement of equivalents and similar to the process of determining the essential parts of an invention. According to Professor Takabayashi, there are two ways of determining the scope of a patent, both similar, and that repeat the same procedure. One is to determine essential parts of a patented invention under the doctrine of equivalents; that is, to determine the scope of a patent for infringement by equivalents. Another is to determine the scope of a patent through claim interpretation. He began by observing that the two were almost the same, and then arrived at a theory of interpretation. After the Federal Court Decision on the case of Festo (Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.,

535 U.S. 722(2002)), narrowed the possible forms of equivalent infringement remarkably. The theory of “flexible interpretation of claim terms” that integrates equivalent infringement with literal infringement will be valid to reach reasonable conclusions, while avoiding a negative aspect of US interpretation theory in which what equivalent infringement is is examined and determined only when literal infringement is rejected through rigorous judgment. Professor Takabayashi asserted that the theory of flexible interpretation of claim terms could provide comprehensive understanding of claim interpretation.

After his speech, the audience raised many questions to Professor Takabayashi and exchanged opinions actively. Part of the question and answer session is related here.



One participant asked whether Professor Takabayashi felt that claim interpretation of a patent under examination should be based on “flexible interpretation of claim terms”. In answer to this question, Professor Takabayashi explained that with regard to functional claims, the description of functional claims should not be allowed according to the Article 36 of the Patent Law and that claim terms of a patent under examination should be interpreted in a rigorous way, not in a flexible way with this respect. He concluded that it was very exceptional, but if the claim must be described functionally, it was interpreted to include the scope of working example plus equivalents and therefore, under current condition of processing patent applications,

he believed claim interpretation while applying a patent is different from that after obtaining a right, however, both would become identical in the end if it is a really excellent claim of a patent. Triggered by this question, more detailed observation on his “flexible interpretation of claim terms” was conducted during the meeting through discussion about the description of functional claims and claims that are limited in number by raising related cases such as the case of coin locker (Tokyo District Court Decision, July 22, 1977, Mutaisaisyu 9・2・544) and US Warner-Jenkinson case(Warner-Jenkinson Co. v. Hilton Davis Chem. Co.,520 U.S.17(1997)) .

The RCLIP workshop aimed to provide an open area for scholars and practitioners to come up with results through discussion with others. The first meeting was held quite successfully with many questions as well as active discussion, evidencing the participants’ interest in the theme.

* Source of quotation: a resume of the speech

(Wrote by RCLIP RA Yuka Aoyagi)

❖RCLIP Workshop Series No. 2

“Entrepreneurial Universities: Their Missions and Technology Transfer Policies”

Ichiro Nakayama, Secretary of Strategic Council on Intellectual Property

Toshiko Takenaka, Professor, University of Washington School of Law, Visiting Professor of Waseda University





In this workshop held on August 3, 2004, Mr. Nakayama presented this report jointly with Prof. Toshiko Takenaka, focusing on the comparison of US/Japanese Bayh Dole Acts and review of the impacts of these Acts on R&D activities at Japanese universities and on innovation policy. The report was revised from what was presented at a Symposium sponsored by Goteborgs University, Sweden in June of 2004, taking into account feedback from European scholars and new legislations under IP basic law.

1. Comparison of US and Japanese Bayh-Dole Acts

The U.S. Bayh-Dole Act was enacted in 1980 as part of the Patent Act to allow universities and nonprofit organizations to retain patent rights resulting from federal funded research and development. Only under very limited circumstances, can the government refuse their contractors, universities, to retain patent rights. In Japan, the Bayh Dole Act was enacted as "Article 30 of the Law on Special Measures for Industrial Revitalization" of 1999. The Act deals with patents and other intellectual property rights. Regarding business contents, Article 25 of the Law on Creation, Protection and Exploitation of Contents" of 2004 functions as the Bayh-Dole Act. These laws were enacted to encourage government-funded research activities and to promote the exploitation of research results and effective utilization of business contents resulting from government contracted works. In principle, inventions by university faculty are viewed to be outside of Bayh Dole jurisdiction because Japanese Bayh Dole provisions cover only IP rights resulting from contracted works, and the majority of university inventions result from research supported by general science and research funds

provided by the Japanese government. For inventions that lie within the scope of the Bayh Dole Act, it was not clear if they meet the definition of an employee invention. Under the Japanese patent law Article 35, employers are prevented from contracting with their employees to transfer rights for a patent with respect to an invention made by the employees unless the invention meets the definition of an employee invention. For an invention to be considered an employee invention it must fall within the scope of the employer's business and the invention must be made with respect to the duty of employee. However, it was unclear whether the making of an invention should find its bounds within the business of the university or with the project faculty. National universities were unable to retain IP rights because they did not have a legal entity.

2. Ownership of University Inventions

Pertaining to results in research supported by general science and research funds provided by the Japanese government, rights for patents on inventions developed by university faculty and researchers had been considered to belong to individual inventors. However, the Ministry of Education published a report prepared by the IPR Working Group in November 2002 to clarify that one of the missions of universities is that to contribute to the society through the applied use of results found in research, and also for the duty of the faculty to include the creation of IP rights if the field of research requires it. The conclusion was reached at last that university inventions are considered to fall under the definition of employee inventions. Further, the enactment of TLO Promotion Law and Basic IP Law led to the creation of IP headquarters at major Japanese universities for the procurement and management

of patents for university inventions. National universities also acquired status as independent administrative legal entities after April of 2004 and since then have been able to possess IP rights. Presently, the majority of Japanese universities have adopted an IP policy that says inventions made by faculty through the use of university facilities constitute employee inventions, thus patent rights are automatically transferred to universities at the completion of any such invention.

3. Impact of Bayh Dole Acts

The number of patents issued to US universities has increased from approximately 100 in 1965, 500 in 1980, to 3,500 in 1995. Some have argued that university technology transfer activities would have expanded had the Bayh Dole Act not been enacted, however, many agree that the enactment of the Bayh Dole Act accelerated the increase in the number of patents procured by US universities, as well as increased licensing and marketing activities on their inventions. In Japan, the number of patent applications filed by universities has increased from 280 in 1999 to 1679 in 2003. The license revenues and the number of university spin-off companies have significantly increased since the enactment of the Japanese Bayh Dole Act.

4. Challenges to Bayh-Dole System and Possible Solutions

Clearly, the Japanese Government was convinced of the positive economic impact of the US Bayh Dole Act. However, in the United States, the Bayh Dole system faces a challenge from scholars who have expressed serious concerns over possible negative effects that may have been caused by the removal of publicly funded research

results from the public domain.

The Bayh Dole Act is supported by a forward-looking view of the patent system advocated by Prof. Kitch, to whom the patent system parallels a prospect system similar to mining claims. Because many inventions are premature for commercialization at the time a patent is filed, this viewpoint explains why the US patent system gives not only incentives to invent but also incentives to commercialize new inventions. This viewpoint justifies an exclusive patent right that covers not only the invention that the inventor actually invented but its variations and improvements that fall under the scope of claims. In this manner, the patent holder is encouraged to make investments and continue work on such variations in order to bring the invention to be a commercial product. With a guarantee on the control over such small variations, patent holders feel safe to make a substantial investment in commercialization. Because publicly funded research often results in foundation innovations that are upstream to commercial products and require a substantial investment for commercialization, this viewpoint best endorses universities' patenting and technology transfer activities on their inventions.

In contrast, Profs. Merges, Nelson, Eisenberg and Rai as well as many other US scholars carry attention to the blocking aspect of exclusive rights, strongly advocating a backwards-view that analogizes the patent system to a monopoly. These scholars urge to keep such upstream inventions in the public domain. According to this viewpoint, however, patenting upstream inventions places serious obstacles to further innovation because such patents prevent other researchers from obtaining access to upstream inventions necessary for the commercialization of later

inventions. Even if access is not denied, patents on foundation innovations cause access to the upstream inventions to become too costly or practically too difficult to obtain.

Recognizing the inability for universities to keep upstream inventions in the public domain, Prof. Eisenberg and Prof. Rai proposed a reform to the current Bayh Dole system. Their proposal gives research sponsors, such as the NIH, more authority to decide what to patent from publicly funded research results. However, this proposal is impractical because in practice, at the time of invention, it is often difficult to make decisions distinguishing the upstream inventions, which should be kept in the public domain, from downstream inventions, which are suitable for patent protection. Sponsor institutions must make difficult decisions such as these quickly and inform universities about their decisions in order to file an application before publication if the universities want to secure their rights outside the United States. On the other hand, even if an invention appears sufficiently upstream, if the patent issued on the invention has a narrow scope, patenting may result in a minimal impact on further developments. In essence, one cannot make a decision to keep an invention in the public domain until the patent is issued.

A more practical approach to minimizing possible negative side effects that result from patenting on foundation inventions is to encourage universities to adopt a proper license policy that is consistent with the goals of the Patent Act, in which the Bayh Dole Act is a part. Then, if any reform is necessary, the authority of sponsoring institutions to review universities' license policies need be increased. Even if universities fail to adopt a proper license policy, the harm resulting from upstream patents is greatly mitigated as long

as courts function properly. When an over-reaching claim harms further developments, courts can limit the harm by invalidating such claims as a violation of the enablement, through written description requirements, or by interpreting such claims restrictively while preserving their validity. Under exceptional circumstances, US courts can also refuse to grant injunctive relief when the enforcement of such patents conflicts with public policy. Such remedies are not too late at the time of trial and may be even more appropriate then because the impact of upstream patents depends on the conditions of the field of art, which encompasses the availability of alternative technologies. If universities are required to refrain from obtaining any patents due to possible negative impacts on innovation, the cost of losing the opportunities for commercialization is greater than the risk presented by upstream patents. So far, there has been no indication that upstream patents create significant impediments to further research. This is evidence that a case-by-case judicial remedy under the current system works well.

5. Experimental Use Exception

The risk of upstream patents is far greater in the United States than in Japan because US patent law does not provide an exemption from infringement with respect to research activities necessary for further developments. US courts are reluctant to stretch the current statutory exemption for experimental use, which covers only activities to test bioequivalency between new and generic drugs. In contrast, Japanese patent law provides a general research exemption. The exemption is interpreted to cover acts exploiting patented subject matter in order to find out how it works and to develop improvements, although most

scholars are of the opinion that the provision does not cover acts exploiting so called research tools, their primary use being to test a third object.

6. Impact on Academic Culture and University Missions

A more serious concern regarding the Japanese Bayh Dole Act is its impact on the academic culture and leading missions of universities. The IP Basic Law emphasizes that of the missions of Japanese universities include the creation of intellectual property as well as contribution to society through the applied use of research results. The Strategic Program on Creation, Protection and Utilization of Intellectual Property made clear that universities and university faculty are evaluated on account of intellectual property. The quality and quantity of intellectual property, however, does not reflect the quality of education. Further, the Strategic Program emphasizes efficiency in the management of technology transfer activities and encourages universities to learn from industries regarding how to procure and exploit patents. However, the mission of university technology transfer is very different from that of industry licensing. If technology managers at university TLOs ignore the difference and try to enforce industry norms in managing technology transfer activities, a culture clash between technology managers and academic inventors is inevitable. For example, a strong awareness of intellectual property rights may halt communication between researchers before an application is filed because of the limited grace period under the current Japanese patent law. Moreover, such duties of intellectual property creation may bring about inequity between faculty members who are in the field where the creation of intellectual property is

expected and others who are in the field where the creation of intellectual property is not expected.

7. Conclusion

There is no doubt that the Bayh Dole Act has been a great success for US Patent Policy and that it has brought many new technologies and industries into existence in this knowledge-based economy of the 21st century. To enhance the system, US System will need to expand the current research exemption to exempt exploitation of the patented subject matter for further innovation. Also, in order to prevent the destruction of innovative inventions, the Japanese System will need to review the current grace period and encourage communication among university faculty prior to patent filing. Both US and Japanese systems need to develop a comprehensive evaluation system to review technology transfer activities at universities, taking into account the traditional missions of universities, the traditional area of academic research and the freedom for study. For this, it is necessary to pay attention to the global perspective by taking into account IP related treaties such as WTO TRIPs and existing license policies, such as NIH research tool guidelines and OECD license guidelines.

8. Comments by Prof. Takenaka

Prof. Takenaka made clear the points where she and Mr. Nakayama disagreed. Mr. Nakayama believes that in addition to the adoption of a proper license policy, it is necessary to keep upstream inventions in the public domain from filing for a patent. However, Prof. Takenaka has doubts on whether upstream inventions can be distinguished from downstream inventions, considering that the universities, when filing an application prior to public release, are pressed for time trying to

maintain rights for patents outside of the United States. Mr. Nakayama agreed with her on the grounds that it is difficult to classify inventions but he still maintains that some inventions are clearly upstream and should be kept in the public domain.



(Questions and Answers)

Does the U.S. Bayh-Dole Act require an adoption of a non-exclusive licensing policy?

No. Mr. Nakayama explained that the weight between exclusive versus non-exclusive licenses granted by US universities is 50:50. In particular, 90% of licenses granted to startups were exclusive.

Can Technology Licensing Organization(TLO) use a form of “trust” in its contract? Mr. Nakayama answered that it is more appropriate to transfer rights to universities in the United States because TLOs are part of US universities. However, as TLOs were not part of Japanese national universities before April of 2004, it is possible to use “trust” for IP rights that researchers possess individually or for rights created before April of 2004 in Japan. How are intellectual rights evaluated? Prof. Takenaka answered that it seems impossible to evaluate intellectual property quantitatively in the United States. For investing technology startups, intellectual property rights are evaluated with respect to the validity and scope of exclusive rights together with other factors such as the capability of management personnel. Mr. Nakayama stated that Japanese IP accounting only provides qualitative information

disclosure. It seems possible to identify the value of an invention through R&D when a patent application is filed, yet why does Professor Takenaka still insist that inventions cannot be classified into upstream or downstream inventions at this time? What is being implied? Because the value of invention depends on the scope of patent and availability of alternative technology, she does not think that one can classify inventions at the time of filing. However, she added, because of budget restraints, it is inevitable for US universities to selectively file an application, and there is more likelihood US universities will find licenses when they apply for patents. Even within same science and engineering departments, do you think that researchers who study a basic science are unfairly disadvantaged to researchers who study applied technologies? Prof. Takenaka agreed that there might be some disadvantages for basic science researchers. However, she pointed out that incentives such as research grants are available for US researchers who study basic science. Mr. Nakayama explained that in Japan, because research grants are provided for any project, he does not think that basic science researchers are unfairly disadvantaged from other researchers. I heard that the majority of US university TLOs are losing money through their operations and TLOs in Japan will eventually lose money too. Why do universities still engage in technology transfer activities? Should we think that industry wants to participate in technology transfer activities because the reputation of universities gives some value to the industry? Prof. Takenaka emphasized that universities can contribute to the society through exploitation of inventions and provide educational opportunities to students through technology transfer activities. Thus, she believes that universities should engage

